CANADIAN JOURNAL OF BIOCHEMISTRY, VOLUME 48

AUTHOR INDEX

Adams, G. A.
The chemical constitution of lipid A from *Serratia marcescens*. G. A. Adams and P. P. Singh, 55.

Adams, G. H. M.
Phosphate content of goose erythrocyte histones. G. H. M. Adams, G. Vidali, and J. M. Neelin, 33.

Alexander, J. C.
Nuclear magnetic resonance and ultraviolet studies of the effect of p^2H on reduced nicotinamide–adenine dinucleotide. P. R. Griffith, M. J. Nye, and J. C. Alexander, 947.

Ali, S. S.
Quantitative estimation of bile salts in serum. S. S. Ali and N. B. Javitt, 1054.

Allen, G.
Purification of *Neurospora crassa* endonuclease-resistant DNA–RNA hybrid. M. J. Fraser, E. Z. Rabin, and G. Allen, 501.

Allen, L. C.
Reaction of amino acids with guanidinating agents. L. C. Allen and T. Viswanatha, 1189.

Anhalt, B.
Lipid metabolism in rabbit lungs. B. M. J. Wolfe, B. Anhalt, J. C. Beck, and D. Rubinstein, 170.

Antia, N. J.
Identification and characterization of phospholipase D in a unicellular red alga (*Porphyridium cruentum*). N. J. Antia, E. Bilinski, and Y. C. Lau, 643.

Anwar, R. A.
The isolation and characterization of a new form of porcine pancreatic carboxypeptidase A (carboxypeptidase A_α). A. S. Narayanan and R. A. Anwar, 7.

Archer, M. C.
Rearrangement of quinonoid dihydropteridines to 7,8-dihydropteridines. M. C. Archer and K. G. Scrimgeour, 278.
Reduction potentials of tetrahydropterins. M. C. Archer and K. G. Scrimgeour, 526.

Armstrong, D. T.
Studies on the rapid cholesterol depleting and steroidogenic actions of luteinizing hormone in the rat ovary: effects of amino glutethimide phosphate. H. R. Behrman, D. T. Armstrong, and R. O. Greep, 881.

Ashton, F. E.
Studies on the effect of inflammation on rat serum proteins. P. E. Ashton, J. C. Jamieson, and A. D. Friesen, 841.

Augenfeld, J.
Carnitine palmitoyltransferase activity and fatty acid oxidation by livers from fetal and neonatal rats. J. Augenfeld and I. B. Fritz, 288.

Aung, B. D.
The effect of puromycin and aminonucleoside on kidney proteins. D. M. Nicholls, C. G. Westall, and B. D. Aung, 1087.

A'zary, E. P.
The middle ultraviolet spectra of proteins. I. Studies on model compounds. E. P. A'zary and C. C. Bigelow, 953.
The middle ultraviolet spectra of proteins. II. The denatured states of RNase. E. P. A'zary and C. C. Bigelow, 962.

Baer, E.
Phosphonolipids. XXI. Synthesis of phosphonic acid analogues of diether L-α-(*N*,*N*-dimethyl)cephalins. E. Baer and K. V. J. Rao, 184.
Phosphonolipids. XXII. Synthesis of phosphonic acid analogues of L-α-(*N*-methyl)cephalins. E. Baer and S. K. Pavanaram, 221.
Phosphonolipids. XXIII. Synthesis of phosphonic acid analogues of L-α-(*N*-methyl)cephalins. E. Baer and K. Pavanaram, 979.
Phosphonolipids. XXIV. Phosphonolipid metabolites. Synthesis of L-α-glyceryl-(*N*-methyl-2-aminoethyl)phosphonate. E. Baer and S. K. Pavanaram, 988.
Detection of carbon–phosphorus bonds by proton nuclear magnetic resonance spectroscopy. C. Benezra, S. K. Pavanaram, and E. Baer, 991.
Synthesis of α-phosphotidic acids. E. Baer and H. Basu, 1010.

Barton, P. G.
Studies of dialkyl ether phospholipids. I. Chemical synthesis of some model compounds. J.-S. Chen and P. G. Barton, 585.

Bastin, M.
Oxidation processes in relation to the induction of enzymes in Jerusalem artichoke tuber slices. M. Bastin and H. Dijkmans, 316.

Basu, H.
Synthesis of α-phosphotidic acids. E. Baer and H. Basu, 1010.

Beck, J. C.
Lipid metabolism in rabbit lungs. B. M. J. Wolfe, B. Anhalt, J. C. Beck, and D. Rubinstein, 170.

Bégin-Heick, N.
Oxygen toxicity and carbon deprivation in *Astasia longa*. N. Bégin-Heick, 251.

Behrman, H. R.
Studies on the rapid cholesterol depleting and steroidogenic actions of luteinizing hormone in the rat ovary: effects of amino glutethimide phosphate. H. R. Behrman, D. T. Armstrong, and R. O. Greep, 881.

Belzile, L.
Incorporation de la radioactivité du chlorure de (2-chloroéthyl)triméthylammonium 1,2-^{14}C dans la phosphatidylcholine de folioles de luzerne, C. Willemot et L. Belzile, 995.

Benezra, C.
Detection of carbon–phosphorus bonds by proton nuclear magnetic resonance spectroscopy. C. Benezra, S. K. Pavanaram, and E. Baer, 991.

Benoiton, N. L.
The interaction of α-chymotrypsin with phenylalanine derivatives containing a free α-amino group. J. E. Purdie and N. L. Benoiton, 1058.
Effect of *N*-methylation and chain length on kinetic constants of trypsin substrates. ε-*N*-Methyllysine and homolysine derivatives as substrates. J. H. Seely and N. L. Benoiton, 1122.

Berlinguet, L.
Biosynthesis of *N*-acetyl-L-aspartic acid in vivo and in brain homogenates. L. Berlinguet and M. Laliberté, 207.

Bigelow, C. C.
The middle ultraviolet spectra of proteins. I. Studies on model compounds. E. P. A'zary and C. C. Bigelow, 953.
The middle ultraviolet spectra of proteins. II. The denatured states of RNase. E. P. A'zary and C. C. Bigelow, 962.

Bhai, I.
Role of glucose cycloacetoacetate hydrolysate on tyrosine oxidation. M. C. Nath and I. Bhai, 1178.

Bhatty, R. S.
The characterization of the 12 S "Globulin" from rapeseed and its glycoprotein component. L. A. Goding, R. S. Bhatty, and A. J. Finlayson, 1096.

Bilinski, E.
Identification and characterization of phospholipase D in a unicellular red alga (*Porphyridium cruentum*). N. J. Antia, E. Bilinski, and Y. C. Lau, 643.

Birmingham, M. K.
A comparative study of adrenal steroid biosynthesis in two species of monkeys. A. F. De Nicola and M. K. Birmingham, 85.

Bishop, H. H.
On the specificity of cytidine diphosphate diglycerides in monophosphoinositide biosynthesis by rat brain preparations. H. H. Bishop and K. P. Strickland, 269.

Bissonnette, R. P.
Temperature-sensitive mutation. V. Infection *ts*-mutant of RNA phage R17 and host cell metabolism. S. J. Igarashi, J. F. Elliott, and R. P. Bissonnette, 47.

Black, J. A.
Gene action in the human haptoglobins. III. Isolation of the α chains as single gene products. Isolation, molecular weight, and amino acid composition of α and β chains. J. A. Black, G. F. Q. Chan, C. L. Hew, and G. H. Dixon, 123.
Gene action in the human haptoglobins. IV. Amino acid sequence studies on the haptoglobin α chains. J. A. Black and G. H. Dixon, 133.

Blackwood, A. C.
Identification of an intermediate of phloroglucinol degradation by mass spectroscopic analysis. W. D. Jamieson, A. Taylor, D. K. Mathur, and A. C. Blackwood, 215.

Blake, R. L.
Regulation of liver tyrosine aminotransferase activity in inbred strains and mutant mice. II. Studies on the starvation-induced enzyme adaptation. R. L. Blake, 1043.

Blanchaer, M. C.
Respiration and oxidative phosphorylation by mitochondria of red and white skeletal muscle. M. Y. A. Rigault and M. C. Blanchaer, 27.
Defective respiration and oxidative phosphorylation in muscle mitochondria of hamsters in the late stages of hereditary muscular dystrophy. B. E. Jacobson, M. C. Blanchaer, and K. Wrogemann, 1037.
A magnesium-responsive defect of respiration and oxidative phosphorylation in skeletal muscle mitochondria of dystrophic hamsters. K. Wrogemann, M. C. Blanchaer, and B. E. Jacobson, 1332.

Boulet, M.
Examination of the mineral composition of the micelle of milk by gel filtration. M. Boulet, A. Yang, and R. R. Riel, 816.

Boulton, A. A.
Formation of *p*-tyramine from DOPA and DOPamine in rat brain. A. A. Boulton and L. Quan, 1287.

Bozic, J.
Spectrophotometric determination of gold in biological materials. R. J. Walton, R. J. Thibert, J. Bozic, and W. J. Holland, 823.

Bragg, P. D.
Reduction of nonheme iron in the respiratory chain of *Escherichia coli*. P. D. Bragg, 777.

Brebner, J.
Soluble esterases of human lung. J. Brebner and W. Kalow, 970.

Bridger, W. A.
Kinetic mechanisms of phosphorylase *a*. II. Isotope exchange studies at equilibrium. H. D. Engers, W. A. Bridger, and N. B. Madsen, 755.

Brock, B. L. W.
Glyoxylate aminotransferases from oat leaves. B. L. W. Brock, D. A. Wilkinson, and J. King, 486.

Brown, H. D.
Cholinesterase bonded to paper. R. O. Stasiw, H. D. Brown, and F. X. Hasselberger, 1314.

Brown, S. A.
Biosynthesis of linear furanocoumarins. S. A. Brown, M. El-Dakhakhny, and W. Steck, 863.
Biosynthesis of angular furanocoumarins. W. Steck and S. A. Brown, 872.

Burton, A. F.
Corticosteroid metabolism and liver glycogen in fetal and newborn mice. A. F. Burton, R. M. Greenall, and R. W. Turnell, 178.

Caldwell, I. C.
Tumor cell metabolism in vitro: a study of incubation media. I. C. Caldwell and M. F. Chan, 517.

Campbell, J. D.
Latent *o*-diphenol oxidase in mushrooms (*Agaricus bisporus*). M. Yamaguchi, P. M. Hwang, and J. D. Campbell, 198.

Capindale, J. B.
A new isolation and structure for the endotoxin from *Microcystis aeruginosa* NRC-1. J. R. Murthy and J. B. Capindale, 508.

Cappon, I. D.
Factors affecting protein synthesis in rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, and I. D. Cappon, 105.
The regulation of protein synthesis in nephrotic rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, C. G. Westall, and I. D. Cappon, 308.

Cayen, M. N.
Agents affecting lipid metabolism. XXXIX. Effect of combined administration of ethyl chlorophenoxyisobutyrate and cholestyramine on cholesterol biosynthesis in the rat. M. N. Cayen and D. Dvornik, 1022.

Chalvardjian, A.
Mode of action of choline. V. Sequential changes in hepatic and serum lipids of choline-deficient rats. A. Chalvardjian, 1234.
Effect of phenobarbital on the development of fatty livers in choline-deficient rats. A. Chalvardjian, 1284.

Chan, G. F. Q.
Gene action in the human haptoglobins. III. Isolation of the α chains as single gene products. Isolation, molecular weight, and amino acid composition of α and β chains. J. A. Black, G. F. Q. Chan, C. L. Hew, and G. H. Dixon, 123.

Chan, M. F.
Tumor cell metabolism in vitro: a study of incubation media. I. C. Caldwell and M. F. Chan, 517.

Chan, S. W. C.
The biosynthesis of 18-hydroxycorticosterone from exogenous corticosterone by teleost fish adrenocortical tissue in vitro. T. Sandor, S. W. C. Chan, J. G. Phillips, D. Ensor, I. W. Henderson, and I. C. Jones, 553.

Chang, C. W.
Effect of fluoride on ribosomes and ribonuclease from corn roots. C. W. Chang, 450.

Chapdelaine, A.
L'oxydation de la prégnènolone en progestérone par des préparations de tissus des Orthoptères in vitro. J.-G. Lehoux, A. Chapdelaine et T. Sandor, 407.

Charles, A. M.
Properties of an $NADP^+$-specific isocitric dehydrogenase from *Thiobacillus novellus*. A. M. Charles, 95.

Charlesworth, D.
Hemoglobin Broussais: $\alpha^{90\ Lys \rightarrow Asn}$. F. Vella, D. Charlesworth, P. A. Lorkin, and H. Lehmann, 908.

Cheevers, W. P.
RNA synthesis in polyoma virus-infected cells. I. Pattern of formation of polyribosome-associated messenger RNA during productive infection. W. P. Cheevers and R. Sheinin, 1104.

Chefurka, W.
In vitro synthesis of β-galactosidase by membrane fractions of *Escherichia coli*. W. Chefurka, A. Yapo, and B. Nisman, 893.

Chen, D. M.
Biosynthesis of Se-methylselenocysteine and *S*-methylcysteine in *Astragalus bisulcatus*. D. M. Chen, S. N. Nigam, and W. B. McConnell, 1278.

Chen, J.-S.
Studies of dialkyl ether phospholipids. I. Chemical synthesis of some model compounds. J.-S. Chen and P. G. Barton, 585.

Chippel, D.
Oxidative degradation of dihydrofolate and tetrahydrofolate. D. Chippel and K. G. Scrimgeour, 999.

Chrétien, M.
Effects of glacial acetic acid on the extraction, chemical stability, and biological activities of β-LPH. M. Chrétien and C. Gilardeau, 511.
Isolation and characterization of β-lipolytic from hormone porcine pituitary gland. C. Gilardeau and M. Chrétien, 1017.

Chung, W. P.
Amide groups of some tryptic peptides from the β-chain of horse hemoglobin. D. B. Smith and W. P. Chung, 1160.

Cohen, J. M.
Effects of puromycin aminonucleoside on protein synthesis in *Absidia coerulea*. D. M. Nicholls and J. M. Cohen, 858.

Coldwell, B. B.
Biochemical aspects of the interaction of ethanol with barbiturates. H. Locksley Trenholm, W. B. Maxwell, C. J. Paul, G. S. Wiberg, and B. B. Coldwell, 706.

Colter, J. S.
Physical and chemical studies of Mengo virus variants. III. Absorbance–temperature profiles, sedimentation in dextran sulfate gradients, and total/infectious particle ratios. D. G. Scraba, P. Hostvedt, and J. S. Colter, 412.
Circular dichroism studies on Mengo virus variants and their constituents ribonucleates. C. M. Kay, J. S. Colter, and K. Oikawa, 940.

Connell, G. E.
The conformation of an atypical IgG myeloma protein and its papain fragments. G. E. Connell, K. J. Dorrington, A. F. Lewis, and D. M. Parr, 784.

Craigie, J. S.
Myo-inositol and 2-deoxy-*myo*-inositol in the chrysophycean alga *Monochrysis lutheri* Droop. M. V. Laycock and J. S. Craigie, 699.

Crookston, J. H.
Hemoglobin Manitoba: α102 (G9) serine replaced by arginine. J. H. Crookston, H. A. Farquharson, J. L. Kinderlerer, and H. Lehmann, 911.

Cumming, R. B.
Synthesis of glyceryl ethers by microsomal enzymes derived from fibroblasts (L–M cells) grown in suspension cultures. F. Snyder, B. Malone, and R. B. Cumming, 212.

Dakshinamurti, K.
Biotin and glucose metabolism. K. Dakshinamurti, L. Tarrago-Litvak, and H. C. Hong, 493.
Rat epididymal adipose tissue acetyl-CoA carboxylase. P. R. Desjardins and K. Dakshinamurti, 915.

Datta, A. G.
Aldolase activity in the cell-free extract of the protozoan *Leishmania donovani*. D. K. Ghosh and A. G. Datta, 151.

Davidson, J. B.
Biochemistry of polyglycerophosphatides in central nervous tissue. I. On the biosynthesis, structure, and enzymatic degradation of phosphatidylglycerophosphate and phosphatidylglycero in isolated sheep brain mitrochondria. J. B. Davidson and N. Z. Stanacev, 633.

DeFeudis, F. V.
Omega-amino acids in rat brain. Y. Yoshino, F. V. DeFeudis, and K. A. C. Elliott, 147.

De Nicola, A. F.
A comparative study of adrenal steroid biosynthesis in two species of monkeys. A. F. De Nicola and M. K. Birmingham, 85.

Desjardins, P. R.
Rat epididymal adipose tissue acetyl-CoA carboxylase. P. R. Desjardins and K. Dakshinamurti, 915.

Detroy, R. W.
Aflatoxicol: structure of a new transformation product of aflatoxin B_1. R. W. Detroy and C. W. Hesseltine, 830.

Dick, A. J.
A ribosomal-bond aminopeptidase in *Escherichia coli* B: purification and properties. A. J. Dick, A. T. Matheson, and J. H. Wang, 1181.
A ribosomal-bound aminopeptidase in *Escherichia coli* B: substrate specificity. A. T. Matheson, A. J. Dick, and F. Rollin, 1292.

Dietrich, C. P.
A uronic acid isomerase in *Flavobacterium heparinum*. J. C. Karapally and C. P. Dietrich, 164.
A heparin sulfamidase from mammalian lymphoid tissues. C. P. Dietrich, 725.

Dijkmans, H.
Oxidation processes in relation to the induction of enzymes in Jerusalem artichoke tuber slices. M. Bastin and H. Dijkmans, 316.

D'Iorio, A.
Inhibition of monoamine oxidase by sodium pentobarbital. E. Quevedo and A. D'Iorio, 187.
Multiple monoamine oxidase in rat liver mitochondria. L. Sierens and A. D'Iorio, 659.
A comparison of brain and liver catechol-*O*-methyltransferase. G. D. Rock, J. H. Tong, and A. D'Iorio, 1326.

Dixon, G. H.
Gene action in the human haptoglobins. III. Isolation of the α chains as single gene products. Isolation, molecular weight, and amino acid composition of α and β chains. J. A. Black, G. F. Q. Chan, C. L. Hew, and G. H. Dixon, 123.
Gene action in the human haptoglobins. IV. Amino acid sequence studies on the haptoglobin α chains. J. A. Black and G. H. Dixon, 133.
The resemblance of the combination of human haptoglobin and double hemoglobin molecules to an antigen–antibody reaction. B. Malchy and G. H. Dixon, 192.
Hemoglobin Mahidol: a new hemoglobin α-chain mutant. S. Pootrakul and G. H. Dixon, 1066.
Hemoglobin J Bangkok in a Chinese Canadian newborn. S. Pootrakul, G. R. Gray, and G. H. Dixon, 1370.

Dixon, J. W.
The reaction with nitrous acid of the "active site" N-terminal isoleucine in chymotrypsin and derivatives. J. W. Dixon and T. Hofmann, 671.

Dorrington, K. J.
The conformation of an atypical IgG myeloma protein and its papain fragments. G. E. Connell, K. J. Dorrington, A. F. Lewis, and D. M. Parr, 784.

Dugas, H.
A comparison of properties of the α-lytic protease of *Sorangium* sp. and porcine elastase. H. Kaplan, V. B. Symonds, H. Dugas, and D. R. Whitaker, 649.

Dvornik, D.
Agents affecting lipid metabolism. XXXIX. Effect of combined administration of ethyl chlorophenoxyisobutyrate and cholestyramine on cholesterol biosynthesis in the rat. M. N. Cayen and D. Dvornik, 1022.

Eckhaus, A. S.
The dissociation in vitro of the α- and β-lipoprotein components of human and rat very low density lipoproteins. A. I. Kook, A. S. Eckhaus, and D. Rubinstein, 712.

Ecobichon, D. J.
Characterization of the esterases of canine serum. D. J. Ecobichon, 1359.

El-Dakhakhny, M.
Biosynthesis of linear furanocoumarins. S. A. Brown, M. El-Dakhakhny, and W. Steck, 863.

Elliott, J. F.
Temperature-sensitive mutation. V. Infection *ts*-mutant of RNA phage R17 and host cell metabolism. S. J. Igarashi, J. F. Elliott, and R. P. Bissonnette, 47.

Elliott, K. A. C.
Omega-amino acids in rat brain. Y. Yoshino, F. V. DeFeudis, and K. A. C. Elliott, 147.
Incorporation of carbon atoms from glucose into free amino acids in brain under normal and altered conditions. Y. Yoshino and K. A. C. Elliott, 228.
Effects of various conditions on the movement of carbon atoms derived from glucose into and out of protein in rat brain. Y. Yoshino and K. A. C. Elliott, 236.
Protein-bound amide groups in brain. Y. Yoshino and K. A. C. Elliott, 1175.

Emes, A. V.
Partial purification and properties of L-phenylalanine ammonia-lyase from *Streptomyces verticillatus*. A. V. Emes and L. C. Vining, 613.

Eng, A. C.
Two possible instances of hemoglobin E Saskatoon in Manitoba. A. C. Eng, F. Vella, and C. C. Merry, 45.

Engers, H. D.
Kinetic mechanism of phosphorylase *a*. I. Initial velocity studies. H. D. Engers, S. Shechosky, and N. B. Madsen, 746.
Kinetic mechanisms of phosphorylase *a*. II. Isotope exchange studies at equilibrium. H. D. Engers, W. A. Bridger, and N. B. Madsen, 755.

Ensor, D.
The biosynthesis of 18-hydroxycorticosterone from exogenous corticosterone by teleost fish adrenocortical tissue in vitro. T. Sandor, S. W. C. Chan, J. G. Phillips, D. Ensor, I. W. Henderson, and I. C. Jones, 553.

Farquharson, H. A.
Hemoglobin Manitoba: α102 (G9) serine replaced by arginine. J. H. Crookston, H. A. Farquharson, J. L. Kinderlerer, and H. Lehmann, 911.

Finlayson, A. J.
The characterization of the 12 S "Globulin" from rapeseed and its glycoprotein component. L. A. Goding, R. S. Bhatty, and A. J. Finlayson, 1096.

Fisher, D. D.
Computer-based derivation of rate equations for enzyme-catalyzed reactions II. Rate equations for isotopic exchange. A. R. Schulz and D. D. Fisher, 922.

Fletcher, R.
Peroxidase-catalyzed conjugation of [4-^{14}C]estradiol with albumin and thiols. P. H. Jellinck and R. Fletcher, 1192.

Fraser, M. J.
Isolation of *Neurospora crassa* endonuclease specific for single-stranded DNA. E. Z. Rabin and M. J. Fraser, 389.
Purification of *Neurospora crassa* endonuclease-resistant DNA–RNA hybrid. M. J. Fraser, E. Z. Rabin, and G. Allen, 501.

Freeman, K. D.
Effects of chloramphenicol and its isomers and analogues on the mitochondrial respiratory chain. K. B. Freeman, 469.
Inhibition of mitochondrial and bacterial protein synthesis by chloramphenicol. K. B. Freeman, 479.

Friesen, A. D.
Studies on the effect of inflammation on rat serum proteins. F. E. Ashton, J. C. Jamieson, and A. D. Friesen, 841.

Fritz, I. B.
Carnitine palmitoyltransferase activity and fatty acid oxidation by livers from fetal and neonatal rats. J. Augenfeld and I. B. Fritz, 288.
Studies on the control of fatty acid oxidation in liver preparations from chick embryos. D. J. Koerker and I. B. Fritz, 418.

Gadd, R. E. A.
Studies of the binding of adenine to adenine phosphoribosyltransferase. R. E. A. Gadd and J. F. Henderson, 295.
The role of magnesium ion in the adenine phosphoribosyltransferase reaction. R. E. A. Gadd and J. F. Henderson, 302.
Mechanisms of inhibition of adenine phosphoribosyltransferase by adenine nucleosides and nucleotides. J. F. Henderson, R. E. A. Gadd, H. M. Palser, and M. Hori, 573.

Genest, J.
Secretion rate of dehydroepiandrosterone and dehydroepiandrosterone sulfate in benign essential hypertension as compared to normal subjects. A. Shao, W. Nowaczynski, O. Kuchel, and J. Genest, 1308.

Gertler, A.
Acetyl-L-alanyl-L-alanyl-L-alanine methyl ester: a new highly specific elastase substrate. A. Gertler and T. Hofmann, 384.

Ghosh, D. K.
Aldolase activity in the cell-free extract of the protozoan *Leishmania donovani*. D. K. Ghosh and A. G. Datta, 151.

Gianetto, R.
Synthetic 1-thio-β-D-glucosiduronic acids as substrates for rat-liver β-glucuronidase. C. Hétu and R. Gianetto, 799.

Gilardeau, C.
Effects of glacial acetic acid on the extraction, chemical stability, and biological activities of β-LPH. M. Chrétien and C. Gilardeau, 511.
Isolation and characterization of β-lipolytic from hormone porcine pituitary gland. C. Gilardeau and M. Chrétien, 1017.

Girgis, G. R.
The regulation of protein synthesis in nephrotic rat liver ribosome preparations. D. M. Nicholls and G. R. Girgis, 1222.

Giroud, C. J. P.
Biosynthesis of 1,2-^{3}H and 4-^{14}C steroid sulfates of high specific activity. J. Torday, G. Hall, M. Schweitzer, and C. J. P. Giroud, 148.

Goding, L. A.
The characterization of the 12 S "Globulin" from rapeseed and its glycoprotein component. L. A. Goding, R. S. Bhatty, and A. J. Finlayson, 1096.

Got, R.
Biosynthèse des glycoprotéines. XIV. Role des sites cytoplasmiques dans les cellules embryonnaires et néoplasiques en culture en suspension. P. Louisot, D. Lebre, M.-B. Pradal, J. Gresle et R. Got, 1082.

Grace, N. D.
Relation of polysome structure to ribonuclease and ribonuclease inhibitor activities in livers of magnesium-deficient guinea pigs. N. D. Grace and B. L. O'Dell, 21.

Gray, G. R.
Hemoglobin J Bangkok in a Chinese Canadian newborn. S. Pootrakul, G. R. Gray, and G. H. Dixon, 1370.

Greenall, R. M.
Corticosteroid metabolism and liver glycogen in fetal and newborn mice. A. F. Burton, R. M. Greenall, and R. W. Turnell, 178.

Greep, R. O.
Studies on the rapid cholesterol depleting and steroidogenic actions of luteinizing hormone in the rat ovary: effects of amino glutethimide phosphate. H. R. Behrman, D. T. Armstrong, and R. O. Greep, 881.

Gregoriadis, G.
Regulation of hepatic copper in the rat by the adrenal gland. G. Gregoriadis and T. L. Sourkes, 160.

Gresle, J.
Biosynthèse des glycoprotéines. XIV. Role des sites cytoplasmiques dans les cellules embryonnaires et néoplasiques en culture en suspension. P. Louisot, D. Lebre, M.-B. Pradal, J. Gresle et R. Got, 1082.

Griffith, P. R.
Nuclear magnetic resonance and ultraviolet studies of the effect of p^{2}H on reduced nicotinamide–adenine dinucleotide. P. R. Griffith, M. J. Nye, and J. C. Alexander, 947.

Griffiths, E.
Aminoacyl-tRNA synthetases of *Halobacterium cutirubrum*: preliminary fractionation studies. E. Griffiths, 944.

Haines, D. S. M.
Impaired labelling of liver phosphatidylethanolamine from ethanolamine-^{14}C in choline deficiency. D. S. M. Haines and C. I. Rose, 885.

Hall, G.
Biosynthesis of 1,2-^{3}H and 4-^{14}C steroid sulfates of high specific activity. J. Torday, G. Hall, M. Schweitzer, and C. J. P. Giroud, 148.

Halperin, M. L.
An additional role for insulin in the control of fatty acid synthesis independent of glucose transport. M. L. Halperin, 1228.

Harding, W. M.
Similar effects of valine and isoleucine on threonine deaminase. W. M. Harding, J. A. Tubbs, and D. McDaniel, 812.

Hasselberger, F. X.
Cholinesterase bonded to paper. R. O. Stasiw, H. D. Brown, and F. X. Hasselberger, 1314.

Havivi, E.
Effect of hypophysectomy on amino acid, thymidine, and orotic acid incorporation into the mucosa of the small bowel. R. Levitan and E. Havivi, 828.

Heggie, R. M.
The kinetics of the reaction of *N,N*-dimethyl-2-phenylaziridinium ion with bovine erythrocyte acetylcholinesterase. J. E. Purdie and R. M. Heggie, 244.

Henderson, I. W.
The biosynthesis of 18-hydroxycorticosterone from exogenous corticosterone by teleost fish adrenocortical tissue in vitro. T. Sandor, S. W. C. Chan, J. G. Phillips, D. Ensor, I. W. Henderson, and I. C. Jones, 553.

Henderson, J. F.
Studies of the binding of adenine to adenine phosphoribosyltransferase. R. E. A. Gadd and J. F. Henderson, 295.
The role of magnesium ion in the adenine phosphoribosyltransferase reaction. R. E. A. Gadd and J. F. Henderson, 302.
Mechanisms of inhibition of adenine phosphoribosyltransferase by adenine nucleosides and nucleotides. J. F. Henderson, R. E. A. Gadd, H. M. Palser, and M. Hori, 573.

Henneberry, G. O.
Developmental changes in the fatty acid composition of the larval lipid of the house cricket *Acheta domesticus* (L.). E. Y. Lipsitz, J. E. McFarlane, and G. O. Henneberry, 264.

Hesseltine, C. W.
Aflatoxicol: structure of a new transformation product of aflatoxin B_1. R. W. Detroy and C. W. Hesseltine, 830.

Hétu, C.
Synthetic 1-thio-β-D-glucosiduronic acids as substrates for rat-liver β-glucuronidase. C. Hétu and R. Gianetto, 799.

Hew, C. L.
Gene action in the human haptoglobins. III. Isolation of the α chains as single gene products. Isolation, molecular weight, and amino acid composition of α and β chains. J. A. Black, G. F. Q. Chan, C. L. Hew, and G. H. Dixon, 123.

Hillier, B.
RNA distribution in *Saprospira grandis*: the absence of a highly 2′-*O*-methylated RNA species. H. Singh, H. L. Macey, and B. Hillier, 1199.

Hofmann, T.
Acetyl-L-alanyl-L-alanyl-L-alanine methyl ester: a new highly specific elastase substrate. A. Gertler and T. Hofmann, 384.
Large-scale preparation and some properties of penicillopepsin, the acid proteinase of *Penicillium janthinellum*. J. Sodek and T. Hofmann, 425.
Inactivation of bovine thrombin by nitrous acid. S. Magnusson and T. Hofmann, 432.
The reaction with nitrous acid of the "active site" N-terminal isoleucine in chymotrypsin and derivatives. J. W. Dixon and T. Hofmann, 671.
Amino acid sequence around the active site aspartic acid in penicillopepsin. J. Šodek and T. Hofmann, 1014.
The reaction of 2,4,6-trinitrobenzene sulfonic acid with pancreatic elastase. L. Rao and T. Hofmann, 1249.

Holland, W. J.
Spectrophotometric determination of gold in biological materials. R. J. Walton, R. J. Thibert, J. Bozic, and W. J. Holland, 823.

Hollenberg, C. H.
Amino acid incorporation by a cell-free preparation from rat adipose tissue. Effects of fasting. A. H. Shlossberg and C. H. Hollenberg, 113.

Holt, A. S.
Chlorophyllides *c*. J. W. F. Wasley, W. T. Scott, and A. S. Holt, 376.

Hong, H. C.
Biotin and glucose metabolism. K. Dakshinamurti, L. Tarrago-Litvak, and H. C. Hong, 493.

Hopkins, C. Y.
Some reactions of sterculic and malvalic acids. A new source of malvalic acid. M. W. Roomi and C. Y. Hopkins, 759.

Hori, M.
Mechanisms of inhibition of adenine phosphoribosyltransferase by adenine nucleosides and nucleotides. J. F. Henderson, R. E. A. Gadd, H. M. Palser, and M. Hori, 573.

Hostvedt, P.
Physical and chemical studies of Mengo virus variants. III. Absorbance–temperature profiles, sedimentation in dextran sulfate gradients, and total/infectious particle ratios. D. G. Scraba, P. Hostvedt, and J. S. Colter, 412.

Houston, M.
Amino-terminal-blocked tripeptide analogues of the active site of α-chymotrypsin. M. Houston and T. Viswanatha, I.

Howard, A.
Inorganic pyrophosphatase from *Ferrobacillus ferrooxidans* (*Thiobacillus ferrooxidans*). A. Howard and D. G. Lundgren, 1302.

Hudson, A. J.
Palmitic acid-1-^{14}C oxidation by skeletal muscle mitochondria of dystrophic mice. C. H. Lin, A. J. Hudson, and K. P. Strickland, 566.

Hurst, R. O.
Nonsteady-state analysis of multisubstrate enzymic reactions. R. O. Hurst, 805.

Hutzinger, O.
Indoles and auxins. X. 2,4-Dinitrophenylsulfenyl chloride, a reagent for separation and identification of naturally occurring indoles. R. K. Raj and O. Hutzinger, 664.

Hwang, P. M.
Latent *o*-diphenol oxidase in mushrooms (*Agaricus bisporus*). M. Yamaguchi, P. M. Hwang, and J. D. Campbell, 198.

Hynie, I.
Partial purification of phosphodiesterase I from microsomes of rat intestinal mucosa. I. Hynie and S. H. Zbarsky, 1141.
Some properties of phosphodiesterase I from microsomes of rat intestinal mucosa. I. Hynie and S. H. Zbarsky, 1151.

Igarashi, S. J.
Temperature-sensitive mutation. V. Infection *ts*-mutant of RNA phage R17 and host cell metabolism. S. J. Igarashi, J. F. Elliott, and R. P. Bissonnette, 47.
In vitro protein synthesis directed by R17 viral ribonucleic acid. III. A new assay method for cell-free protein synthesis based on a phenylthiohydantoin procedure. S. J. Igarashi and W. W. Paranchych, 438.

Jacobson, B. E.
Defective respiration and oxidative phosphorylation in muscle mitochondria of hamsters in the late stages of hereditary muscular dystrophy. B. E. Jacobson, M. C. Blanchaer, and K. Wrogemann, 1037.
A magnesium-responsive defect of respiration and oxidative phosphorylation in skeletal muscle mitochondria of dystrophic hamsters. K. Wrogemann, M. C. Blanchaer, and B. E. Jacobson, 1332.

Jamieson, J. C.
Studies on the effect of inflammation on rat serum proteins. F. E. Ashton, J. C. Jamieson, and A. D. Friesen, 841.

Jamieson, W. D.
Identification of an intermediate of phloroglucinol degradation by mass spectroscopic analysis. W. D. Jamieson, A. Taylor, D. K. Mathur, and A. C. Blackwood, 215.

Javitt, N. B.
Quantitative estimation of bile salts in serum. S. S. Ali and N. B. Javitt, 1054.

Jellinck, P. H.
Peroxidase-catalyzed conjugation of [4-^{14}C]estradiol with albumin and thiols. P. H. Jellinck and R. Fletcher, 1192.

Jones, I. C.
The biosynthesis of 18-hydroxycorticosterone from exogenous corticosterone by teleost fish adrenocortical tissue in vitro. T. Sandor, S. W. C. Chan, J. G. Phillips, D. Ensor, I. W. Henderson, and I. C. Jones, 553.

Kalow, W.
Soluble esterases of human lung. J. Brebner and W. Kalow, 970.

Kanungo, M. S.
Alterations in glutamate dehydrogenase of the brain of rats of various ages. G. Kaur and M. S. Kanungo, 203.

Kaplan, H.
A comparison of properties of the α-lytic protease of *Sorangium* sp. and porcine elastase. H. Kaplan, V. B. Symonds, H. Dugas, and D. R. Whitaker, 649.

Kaplan, J. G.
Heat-induced disaggregation of a multifunctional enzyme complex catalyzing the first steps in pyrimidine biosynthesis in bakers' yeast. P. F. Lue and J. G. Kaplan, 155.

Karapally, J. C.
A uronic acid isomerase in *Flavobacterium heparinum*. J. C. Karapally and C. P. Dietrich, 164.

Kates, M.
Utilization of glycerophosphate for phospholipid synthesis by cells of *Halobacterium cutirubrum*. M. K. Wassef, M. Kates, and D. J. Kushner, 63.
Stereospecificity of the glycerol kinase and the glycerophosphate dehydrogenase in *Halobacterium cutirubrum*. M. K. Wassef, J. Sarner, and M. Kates, 69.

Kaur, G.
Alterations in glutamate dehydrogenase of the brain of rats of various ages. G. Kaur and M. S. Kanungo, 203.

Kay, C. M.
Circular dichroism studies on Mengo virus variants and their constituent ribonucleates. C. M. Kay, J. S. Colter, and K. Oikawa, 940.

Kay, T.
The activation of chymotrypsinogen by papain. M. C. Shaw, T. Kay, and T. Viswanatha, 1208.

Khouw, B. T.
A rapid method for the assay of dextranase. T. Y. Koh and B. T. Khouw, 225.

Kim, W. K.
Effect of excision and benzimidazole treatment on folate content of wheat leaves and wheat leaf chloroplasts. W. K. Kim, 1091.

Kinderlerer, J. L.
Hemoglobin Manitoba: α102 (G9) serine replaced by arginine. J. H. Crookston, H. A. Farquharson, J. L. Kinderlerer, and H. Lehmann. 911.

King, J.
Glyoxylate aminotransferases from oat leaves. B. L. W. Brock, D. A. Wilkinson, and J. King, 486.

Koerker, D. J.
Studies on the control of fatty acid oxidation in liver preparations from chick embryos. D. J. Koerker and I. B. Fritz, 418.

Koh, T. Y.
A rapid method for the assay of dextranase. T. Y. Koh and B. T. Khouw, 225.

Kook, A. I.
The dissociation in vitro of the α- and β-lipoprotein components of human and rat very low density lipoproteins. A. I. Kook, A. S. Eckhaus, and D. Rubinstein, 712.

Korner, A.
The effect of cell-sap fractions on incorporation of amino acids into protein in rat liver cell-free systems. C. C. Liew and A. Korner, 735.

Kovacs, E. S.
The influence of aminonucleoside on polysome patterns of rat liver. E. S. Kovacs, S. D. Kung, and M. A. Moscarello, 39.

Krahn, P. M.
On the mechanism of messenger RNA binding by *E. coli* 70 S ribosomes. P. M. Krahn and W. Paranchych, 682.

Kuchel, O.
Secretion rate of dehydroepiandrosterone and dehydroepiandrosterone sulfate in benign essential hypertension as compared to normal subjects. A. Shao, W. Nowaczynski, O. Kuchel, and J. Genest, 1308.

Kung, S. D.
The influence of aminonucleoside on polysome patterns of rat liver. E. S. Kovacs, S. D. Kung, and M. A. Moscarello, 39.

Kushner, D. J.
Utilization of glycerophosphate for phospholipid synthesis by cells of *Halobacterium cutirubrum*. M. K. Wassef, M. Kates, and D. J. Kushner, 63.

LaBella, F.
Characterization of amino acids and low-molecular-weight peptides bound to cytoplasmic granules from the posterior pituitary. S. Shin, F. LaBella, and G. Queen, 455.

Laidler, K. J.
The urease-catalyzed hydrolyses of some substituted ureas and esters of carbamic acid. P. V. Sundaram and K. J. Laidler, 1132.

Laliberté, M.
Biosynthesis of *N*-acetyl-L-aspartic acid in vivo and in brain homogenates. L. Berlinguet and M. Laliberté, 207.

Lane, B. G.
The 3′-hydroxyl termini in yeast ribosomal RNA. K. M. Olver and B. G. Lane, 1113.

Lane, E. A.
The permissive role of cortisol in the regulation of rat liver tyrosine aminotransferase. C. Mavrides and E. A. Lane, 13.
Evidence for the coupling of the regulations of tyrosine aminotransferase and phosphoenolpyruvate carboxykinase. E. A. Lane and C. Mavrides, 1297.

Lau, Y. C.
Identification and characterization of phospholipase D in a unicellular red alga (*Porphyridium cruentum*). N. J. Antia, E. Bilinski, and Y. C. Lau, 643.

Laycock, M. V.
Myo-inositol and 2-deoxy-*myo*-inositol in the chrysophycean alga *Monochrysis lutheri* Droop. M. V. Laycock and J. S. Craigie, 699.

Layne, D. S.
The metabolism of 17α-estradiol-3-glucoside and 17α-estradiol-3-glucuronoside in the rabbit. D. G. Williamson and D. S. Layne, 523.

Lebre, D.
Biosynthèse des glycoprotéines. XIV. Role des sites cytoplasmiques dans les cellules embryonnaires et néoplasiques en culture en suspension. P. Louisot, D. Lebre, M.-B. Pradal, J. Gresle et R. Got, 1082.

Lehmann, H.
Hemoglobin Broussais: $\alpha^{90\ Lys \rightarrow AsN}$. F. Vella, D. Charlesworth, P. A. Lorkin, and H. Lehmann, 908.
Hemoglobin Manitoba: α102 (G9) serine replaced by arginine. J. H. Crookston, H. A. Farquharson, J. L. Kinderlerer, and H. Lehmann, 911.

Lehoux, J.-G.
L'oxydation de la prégnènolone en progestérone par des préparations de tissus des Orthoptères in vitro. J.-G. Lehoux, A. Chapdelaine et T. Sandor, 407.

LePage, G. A.
Arabinosyladenine and arabinosylhypoxanthine metabolism in murine tumor cells. G. A. LePage, 75.

Leung, F. Y. T.
Deoxyribonucleic acid polymerase from nuclei of rat intestinal mucosa. F. Y. T. Leung and S. H. Zbarsky, 529.
Terminal deoxyribonucleotidyltransferase from nuclei of rat intestinal mucosa. F. Y. T. Leung and S. H. Zbarsky, 537.

Levitan, R.
Effect of hypophysectomy on amino acid, thymidine, and protic acid incorporation into the mucosa of the small bowel. R. Levitan and E. Havivi, 828.

Lewis, A. F.
The conformation of an atypical IgG myeloma protein and its papain fragments. G. E. Connell, K. J. Dorrington, A. F. Lewis, and D. M. Parr, 784.

Liang, C.-R.
Phospholipid metabolism in the molluscs. II. Activities of choline kinase, ethanolamine kinase, and CTP:phosphorylethanolamine cytidyltransferase in the mollusc *Helix lactea*. C.-R. Liang, M. Segura, and K. P. Strickland, 580.

Lin, C. H.
Palmitic acid-1^{14}C oxidation by skeletal muscle mitochondria of dystrophic mice. C. H. Lin, A. J. Hudson, and K. P. Strickland, 566.

Lipsitz, E. Y.
Developmental changes in the fatty acid composition of the larval lipid of the house cricket *Acheta domesticus* (L.). E. Y. Lipsitz, J. E. McFarlane, and G. O. Henneberry, 264.

Liew, C. C.
The effect of cell-sap fractions on incorporation of amino acids into protein in rat liver cell-free systems. C. C. Liew and A. Korner, 735.

Locksley Trenholm, H.
Biochemical aspects of the interaction of ethanol with barbiturates. H. Locksley Trenholm, W. B. Maxwell, C. J. Paul, G. S. Wiberg, and B. B. Coldwell, 706.

Lorkin, P. A.
Hemoglobin Broussais: $\alpha^{90\ Lys \rightarrow AsN}$. F. Vella, D. Charlesworth, P. A. Lorkin, and H. Lehmann, 908.

Louisot, P.
Biosynthèse des glycoprotéines. XIV. Role des sites cytoplasmiques dans les cellules embryonnaires et néoplasiques en culture en suspension. P. Louisot, D. Lebre, M.-B. Pradal, J. Gresle et R. Got, 1082.

Lue, P. F.
Heat-induced disaggregation of a multifunctional enzyme complex catalyzing the first steps in pyrimidine biosynthesis in bakers' yeast. P. F. Lue and J. G. Kaplan, 155.

Lundgren, D. G.
Inorganic pyrophosphatase from *Ferrobacillus ferrooxidans* (*Thiobacillus ferrooxidans*). A. Howard and D. G. Lundgren, 1302.

Lynn, K. R.
Urease: the 12 S form. K. R. Lynn, 631.

Lyric, R. M.
Enzymes involved in the metabolism of thiosulfate by *Thiobacillus thioparus*. I. Survey of enzymes and properties of sulfite:cytochrome *c* oxidoreductase. R. M. Lyric and I. Suzuki, 334.
Enzymes involved in the metabolism of thiosulfate by *Thiobacillus thioparus*. II. Properties of adenosine-5′-phosphosulfate reductase. R. M. Lyric and I. Suzuki, 344.
Enzymes involved in the metabolism of thiosulfate by *Thiobacillus thioparus*. III. Properties of thiosulfate-oxidizing enzyme and proposed pathway of thiosulfate oxidation. R. M. Lyric and I. Suzuki, 355.
Kinetic studies of sulfite:cytochrome oxidoreductase, thiosulfate-oxidizing enzyme, and adenosine-5′-phosphosulfate reductase from *Thiobacillus thioparus*. R. M. Lyric and I. Suzuki, 594.

Maass, W. S. G.
Lichen substances. IV. Incorporation of pulvinic-^{14}C acids into calycin by the lichen *Pseudocyphellaria crocata*. W. S. G. Maass, 1241.

MacDonald, J. C.
Biosynthesis of compounds similar to aspergillic acid. J. C. MacDonald, 1165.

Macey, H. L.
RNA distribution in *Saprospira grandis*: the absence of a highly 2′-*O*-methylated RNA species. H. Singh, H. L. Macey, and B. Hillier, 1199.

MacLennan, D. H.
Studies on the mitochondrial adenosine triphosphatase system. VI. Coupling activity of F_1 subunits. D. H. MacLennan and C. W. Paulson, 1079.

Madsen, N. B.
Kinetic mechanism of phosphorylase *a*. I. Initial velocity studies. H. D. Engers, S. Shechosky, and N. B. Madsen, 746.
Kinetic mechanisms of phosphorylase *a*. II. Isotope exchange studies at equilibrium. H. D. Engers, W. A. Bridger, and N. B. Madsen, 755.
The sulfhydryl groups of muscle phosphorylase. V. The reactive sulfhydryl peptides. C. G. Zarkadas, L. B. Smillie, and N. B. Madsen, 763.

Magnusson, S.
Inactivation of bovine thrombin by nitrous acid. S. Magnusson and T. Hofmann, 432.

Malchy, B.
The resemblance of the combination of human haptoglobin and double hemoglobin molecules to an antigen–antibody reaction. B. Malchy and G. H. Dixon, 192.

Malone, B.
Synthesis of glyceryl ethers by microsomal enzymes derived from fibroblasts (L–M cells) grown in suspension cultures. F. Snyder, B. Malone, and R. B. Cumming, 212.

Marquardt, R. R.
Multiple molecular forms of avian aldolases. IV. Purification and properties of chicken (*Gallus domesticus*) brain aldolase. R. R. Marquardt, 322.

Matheson, A. T.
A ribosomal-bound aminopeptidase in *Escherichia coli* B: purification and properties. A. J. Dick, A. T. Matheson, and J. H. Wang, 1181.
A ribosomal-bound aminopeptidase in *Escherichia coli* B: substrate specificity. A. T. Matheson, A. J. Dick, and F. Rollin, 1292.

Mathur, D. K.
Identification of an intermediate of phloroglucinol degradation by mass spectroscopic analysis. W. D. Jamieson, A. Taylor, D. K. Mathur, and A. C. Blackwood, 215.

Mauritzen, C. M.
Isolation and preservation of cell nuclei for studies on RNA polymerase activity. R. S. D. Read and C. M. Mauritzen, 559.

Mavrides, C.
The permissive role of cortisol in the regulation of rat liver tyrosine aminotransferase. C. Mavrides and E. A. Lane, 13.
Evidence for the coupling of the regulations of tyrosine aminotransferase and phosphoenolpyruvate carboxykinase. E. A. Lane and C. Mavrides, 1297.

Maxwell, W. B.
Biochemical aspects of the interaction of ethanol with barbiturates. H. Locksley Trenholm, W. B. Maxwell, C. J. Paul, G. S. Wiberg, and B. B. Coldwell, 706.

McConnell, W. B.
Biosynthesis of Se-methylselenocysteine and *S*-methylcysteine in *Astragalus bisulcatus*. D. M. Chen, S. N. Nigam, and W. B. McConnell, 1278.

McDaniel, D.
Similar effects by valine and isoleucine on threonine deaminase. W. M. Harding, J. A. Tubbs, and D. McDaniel, 812.

McFarlane, J. E.
Developmental changes in the fatty acid composition of the larval lipid of the house cricket *Acheta domesticus* (L.). E. Y. Lipsitz, J. E. McFarlane, and G. O. Henneberry, 264.

Mead, J. F.
A potentially unique type of lipid storage in the migrating salmon. J. S. Robinson and J. F. Mead, 837.

Merry, C. C.
Two possible instances of hemoglobin E Saskatoon in Manitoba. A. C. Eng, F. Vella, and C. C. Merry, 45.

Miall, S. H.
Factors affecting protein synthesis in rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, and I. D. Cappon, 105.
The regulation of protein synthesis in nephrotic rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, C. G. Westall, and I. D. Cappon, 308.

Miller, R. W.
Reactions of superoxide anion, catechols and cytochrome *c*. R. W. Miller, 935.

Milligan, L. P.
Carbon dioxide fixing pathways of glutamic acid synthesis in the rumen. L. P. Milligan, 463.

Moore, B. G.
Differential inhibition of bacterial tRNA methylases by *S*-adenosylethionine and other adenine derivatives. B. G. Moore, 702.

Moscarello, M. A.
The influence of aminonucleoside on polysome patterns of rat liver. E. S. Kovacs, S. D. Kung, and M. A. Moscarello, 39.

Murthy, J. R.
A new isolation and structure for the endotoxin from *Microcystis aeruginosa* NRC-1. J. R. Murthy and J. B. Capindale, 508.

Nakamura, L. K.
Influence of the acceptor during transglucosylation by transglucosylamylase of *Candida tropicalis*. L. K. Nakamura, 1260.

Narayanan, A. S.
The isolation and characterization of a new form of porcine pancreatic carboxypeptidase A (carboxypeptidase A_s). A. S. Narayanan and R. A. Anwar, 7.

Nath, M. C.
Role of glucose cycloacetoacetate hydrolysate on tyrosine oxidation. M. C. Nath and I. Bhai, 1178.

Neelin, J. M.
Phosphate content of goose erythrocyte histones. G. H. M. Adams, G. Vidali, and J. M. Neelin, 33.

Nicholls, D. M.
Factors affecting protein synthesis is rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, and I. D. Cappon, 105.
The regulation of protein synthesis in nephrotic rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, C. G. Westall, and I. D. Cappon, 308.
Effects of puromycin aminonucleoside on protein synthesis in *Absidia coerulea*. D. M. Nicholls and J. M. Cohen, 858.
The effect of puromycin and aminonucleoside on kidney proteins. D. M. Nicholls, C. G. Westall, and B. D. Aung, 1087.
The regulation of protein synthesis in nephrotic rat liver ribosome preparations. D. M. Nicholls and G. R. Girgis, 1222.

Nigam, S. N.
Biosynthesis of Se-methylselenocysteine and *S*-methylcysteine in *Astragalus bisulcatus*. D. M. Chen, S. N. Nigam, and W. B. McConnell, 1278.

Nisman, B.
In vitro synthesis of β-galactosidase by membrane fractions of *Escherichia coli*. W. Chefurka, A. Yapo, and B. Nisman, 893.

Nowaczynski, W.
Secretion rate of dehydroepiandrosterone and dehydroepiandrosterone sulfate in benign essential hypertension as compared to normal subjects. A. Shao, W. Nowaczynski, O. Kuchel, and J. Genest, 1308.

Nye, M. J.
Nuclear magnetic resonance and ultraviolet studies of the effect of p^2H on reduced nicotinamide–adenine dinucleotide. P. R. Griffith, M. J. Nye, and J. C. Alexander, 947.

O'Dell, B. L.
Relation of polysome structure to ribonuclease and ribonuclease inhibitor activities in livers of magnesium-deficient guinea pigs. N. D. Grace and B. L. O'Dell, 21.

Odense, P.
The effect of urea upon the activity measurement of cod muscle cathepsin with hemoglobin substrate. M. B. Wojtowicz and P. Odense, 1050.

Oikawa, K.
Circular dichroism studies on Mengo virus variants and their constituent ribonucleates. C. M. Kay, J. S. Colter, and K. Oikawa, 940.

Okany, A.
Phospholipids. IV. Studies on the antithromboplastic activity of phosphatidylserine preparations and their derivatives. V. Zitko, A. Okany, and L. Palagy, 1318.

Olver, K. M.
The 3′-hydroxyl termini in yeast ribosomal RNA. K. M. Olver and B. G. Lane, 1113.

Onodera, K.
Studies on the biochemical properties of surface component of normal and SV-40 transformed 3T3 mouse cells R. Sheinin and K. Onodera, 851.

Palagy, L.
Phospholipids. IV. Studies on the antithromboplastic activity of phosphatidylserine preparations and their derivatives. V. Zitko, A. Okany, and L. Palagy, 1318.

Palser, H. M.
Mechanisms of inhibition of adenine phosphoribosyltransferase by adenine nucleosides and nucleotides. J. F. Henderson, R. E. A. Gadd, H. M. Palser, and M. Hori, 573.

Paranchych, W.
In vitro protein synthesis directed by R17 viral ribonucleic acid. III. A new assay method for cell-free protein synthesis based on a phenylthiohydantoin procedure. S. J. Igarashi and W. W. Paranchych, 438.
On the mechanism of messenger RNA binding by *E. coli* 70 S ribosomes. P. M. Krahn and W. Paranchych, 682.

Parr, D. M.
The conformation of an atypical IgG myeloma protein and its papain fragments. G. E. Connell, K. J. Dorrington, A. F. Lewis, and D. M. Parr, 784.

Paterson, A. R. P.
Combination chemotherapy: treatment of the Ehrlich ascites carcinoma and several drug-resistant sublines with combinations of 6-mercaptopurine and 6-(methylmercapto)purine ribonucleoside. A. R. P. Paterson and M. C. Wang, 79.

Paul, C. J.
Biochemical aspects of the interaction of ethanol with barbiturates. H. Locksley Trenholm, W. B. Maxwell, C. J. Paul, G. S. Wiberg, and B. B. Coldwell, 706.

Paulson, C. W.
Studies on the mitochondrial adenosine triphosphatase system. VI. Coupling activity of F_1 subunits. D. H. MacLennan and C. W. Paulson, 1079.

Pavanaram, S. K.
Phosphonolipids. XXII. Synthesis of phosphonic acid analogues of L-α-(*N*-methyl)cephalins. E. Baer and S. K. Pavanaram, 221.
Phosphonolipids. XXIII. Synthesis of phosphonic acid analogues of L-α-(*N*-methyl)cephalins. E. Baer and S. K. Pavanaram, 979.
Phosphonolipids. XXIV. Phosphonolipid metabolites. Synthesis of L-α-glyceryl-(*N*-methyl-2-aminoethyl)phosphonate. E. Baer and S. K. Pavanaram, 988.
Detection of carbon–phosphorus bonds by proton nuclear magnetic resonance spectroscopy. C. Benezra, S. K. Pavanaram, and E. Baer, 991.

Perry, M. B.
Ion exchange chromatography of 2-amino-2-deoxy-D-hexoses. M. Yaguchi and M. B. Perry, 386.

Pickard, M. A.
Fungal metabolism of flavonoids. Purification, properties, and substrate specificity of an inducible laccase from *Polyporus versicolor* PRL 572. M. A. Pickard and D. W. S. Westlake, 1351.

Pitel, D. W.
Preparation of gibberellin A_1-3,4-^{3}H. D. W. Pitel and L. C. Vining, 259.
Accumulation of dehydrofusaric acid and its conversion to fusaric and 10-hydroxyfusaric acids in cultures of *Gibberella fujikuroi*. D. W. Pitel and L. C. Vining, 623.

Phillips, J. G.
The biosynthesis of 18-hydroxycorticosterone from exogenous corticosterone by teleost fish adrenocortical tissue in vitro. T. Sandor, S. W. C. Chan, J. G. Phillips, D. Ensor, I. W. Henderson, and I. C. Jones, 553.

Pootrakul, S.
Hemoglobin Mahidol: a new hemoglobin α-chain mutant, S. Pootrakul and G. H. Dixon, 1066.
Hemoglobin J Bangkok in a Chinese Canadian newborn. S. Pootrakul, G. R. Gray, and G. H. Dixon, 1370.

Pradal, M.-B.
Biosynthèse des glycoprotéines. XIV. Role des sites cytoplasmiques dans les cellules embryonnaires et néoplasiques en culture en suspension. P. Louisot, D. Lebre, M.-B. Pradal, J. Gresle et R. Got, 1082.

Purdie, J. E.
The kinetics of the reaction of *N,N*-dimethyl-2-phenylaziridinium ion with bovine erythrocyte acetylcholinesterase. J. E. Purdie and R. M. Heggie, 244.
The interaction of α-chymotrypsin with phenylalanine derivatives containing a free α-amino group. J. E. Purdie and N. L. Benoiton, 1058.

Quan, L.
Formation of *p*-tyramine from DOPA and DOPamine in rat brain. A. A. Boulton and L. Quan, 1287.

Queen, G.
Characterization of amino acids and low-molecular-weight peptides bound to cytoplasmic granules from the posterior pituitary. S. Shin, F. LaBella, and G. Queen, 455.

Quevedo, E.
Inhibition of monoamine oxidase by sodium pentobarbital. E. Quevedo and A. D'Iorio, 187.

Rabin, E. Z.
Isolation of *Neurospora crassa* endonuclease specific for single-stranded DNA. E. Z. Rabin and M. J. Fraser, 389.
Purification of *Neurospora crassa* endonuclease-resistant DNA–RNA hybrid. M. J. Fraser, E. Z. Rabin, and G. Allen, 501.

Raj, R. K.
Indoles and auxins, X. 2,4-Dinitrophenylsulfenyl chloride, a reagent for separation and identification of naturally occurring indoles. R. K. Raj and O. Hutzinger, 664.

Rao, K. V. J.
Phosphonolipids. XXI. Synthesis of phosphonic acid analogues of diether L-α-(*N,N*-dimethyl)cephalins. E. Baer and K. V. J. Rao, 184.

Rao, L.
The reaction of 2,4,6-trinitrobenzene sulfonic acid with pancreatic elastase. L. Rao and T. Hofmann, 1249.

Read, R. S. D.
Isolation and preservation of cell nuclei for studies on RNA polymerase activity. R. S. D. Read and C. M. Mauritzen, 559.

Riel, R. R.
Examination of the mineral composition of the micelle of milk by gel filtration. M. Boulet, A. Yang, and R. R. Riel, 816.

Rigault, M. Y. A.
Respiration and oxidative phosphorylation by mitochondria of red and white skeletal muscle. M. Y. A. Rigault and M. C. Blanchaer, 27.

Robinson, J. S.
A potentially unique type of lipid storage in the migrating salmon. J. S. Robinson and J. F. Mead, 837.

Rock, G. D.
A comparison of brain and liver catechol-*O*-methyltransferase. G. D. Rock, J. H. Tong, and A. D'Iorio, 1326.

Rollin, F.
A ribosomal-bound aminopeptidase in *Escherichia coli* B: substrate specificity. A. T. Matheson, A. J. Dick, and F. Rollin, 1292.

Ronnen, E.
The effect of chloramphenicol on the induction of cyanase in *Escherichia coli*. A. Taussig and E. Ronnen, 790.

Roomi, M. W.
Some reactions of sterculic and malvalic acids. A new source of malvalic acid. M. W. Roomi and C. Y. Hopkins, 759.

Rose, C. I.
Impaired labelling of liver phosphatidylethanolamine from ethanolamine-^{14}C in choline deficiency. D. S. M. Haines and C. I. Rose, 885.

Rubinstein, D.
Lipid metabolism in rabbit lungs. B. M. J. Wolfe, B. Anhalt, J. C. Beck, and D. Rubinstein, 170.
The dissociation in vitro of the α- and β-lipoprotein components of human and rat very low density lipoproteins. A. I. Kook, A. S. Eckhaus, and D. Rubinstein, 712.

Ryan, M. P.
Factors affecting protein synthesis in rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, and I. D. Cappon, 105.
The regulation of protein synthesis in nephrotic rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, C. G. Restall, and I. D. Cappon, 308.
L'oxydation de la prégnènolone en progestérone par des préparations de tissue des Orthoptères in vitro. J.-G. Lehoux, A. Chapdelaine et T. Sandor, 407.

Sandor, T.
L'oxydation de la prégnènolone en progestérone par les préparations de tissus des Orthoptères in vitro. J.-G. Lehoux, A. Chapdelaine et T. Sandor, 407.
The biosynthesis of 18-hydroxycorticosterone from exogenous corticosterone by teleost fish adrenocortical tissue in vitro. T. Sandor, S. W. C. Chan, J. G. Phillips, D. Ensor, I. W. Henderson, and I. C. Jones, 553.

Sarkar, B.
State of iron(III) in normal human serum: low molecular weight and protein ligands besides transferrin. B. Sarkar, 1339.

Sarkissian, I. V.
High efficiency of oxidative phosphorylation in mitochondria of wheat. I. V. Sarkissian and H. K. Srivastava, 692.

Sarner, J.
Stereospecificity of the glycerol kinase and the glycerophosphate dehydrogenase in *Halobacterium cutirubrum*. M. K. Wassef, J. Sarner, and M. Kates, 69.

Schulz, A. R.
Computer-based derivation of rate equations for enzyme-catalyzed reactions II. Rate equations for isotopic exchange. A. R. Schulz and D. D. Fisher, 922.

Schwark, W. S.
Metabolic control mechanisms in mammalian system. XI. Pyruvate kinase modulation in the rat prostate and seminal vesicles. R. Vijayvargiya, W. S. Schwark, and R. L. Singhal, 1268.

Schweitzer, M.
Biosynthesis of 1,2-^{3}H and 4-^{14}C steroid sulfates of high specific activity. J. Torday, G. Hall, M. Schweitzer, and C. J. P. Giroud, 148.

Scott, W. T.
Chlorophyllides *c*. J. W. F. Wasley, W. T. Scott, and A. S. Holt, 376.

Scraba, D. G.
Physical and chemical studies of Mengo virus variants. III. Absorbance–temperature profiles, sedimentation in dextran sulfate gradients, and total/infectious particle ratios. D. G. Scraba, P. Hostvedt, and J. S. Colter, 412.

Scrimgeour, K. G.
Rearrangement of quinonoid dihydropteridines to 7,8-dihydropteridines. M. C. Archer and K. G. Scrimgeour, 278.
Reduction potentials of tetrahydropterins. M. C. Archer and K. G. Scrimgeour, 526.
Oxidative degradation of dihydrofolate and tetrahydrofolate D. Chippel and K. G. Scrimgeour, 999.

Seely, J. H.
Effect of *N*-methylation and chain length on kinetic constants of trypsin substrates. ε-*N*-Methyllysine and homolysine derivatives as substrates. J. H. Seely and N. L. Benoiton, 1122.

Segura, M.
Phospholipid metabolism in the molluscs. II. Activities of choline kinase, ethanolamine kinase, and CTP:phosphorylethanolamine cytidyltransferase in the mollusc *Helix lactea*. C.-R. Liang, M. Segura, and K. P. Strickland, 580.

Sellers, W. H.
Increased serum haptoglobin following exposure to a hyperbaric environment. D. E. Uddin and W. H. Sellers, 1368.

Shao, A.
Secretion rate of dehydroepiandrosterone and dehydroepiandrosterone sulfate in benign essential hypertension as compared to normal subjects. A. Shao, W. Nowaczynski, O. Kuchel, and J. Genest, 1308.

Shaw, M. C.
The activation of chymotrypsinogen by papain. M. C. Shaw, T. Kay, and T. Viswanatha, 1208.

Shechosky, S.
Kinetic mechanism of phosphorylase *a*. I. Initial velocity studies. H. D. Engers, S. Shechosky, and N. B. Madsen, 746.

Sheinin, R.
Studies on the biochemical properties of surface component of normal and SV-40 transformed 3T3 mouse cells. R. Sheinin and K. Onodera, 851.
RNA synthesis in polyoma virus-infected cells. I. Pattern of formation of polyribosome-associated messenger RNA during productive infection. W. P. Cheevers and R. Sheinin, 1104.

Shin, S.
Characterization of amino acids and low-molecular-weight peptides bound to cytoplasmic granules from the posterior pituitary. S. Shin, F. LaBella, and G. Queen, 455.

Shlossberg, A. H.
Amino acid incorporation by a cell-free preparation from rat adipose tissue. Effects of fasting. A. H. Shlossberg and C. H. Hollenberg, 113.

Sierens, L.
Multiple monoamine oxidase in rat liver mitochondria. L. Sierens and A. D'Iorio, 659.

Simard-Duquesne, N.
Phosphofructokinase and glycolysis in the livers of rats fed a thrombogenic diet. N. Simard-Duquesne, 222.

Singh, H.
RNA distribution in *Saprospira grandis*: the absence of a highly 2′-*O*-methylated RNA species. H. Singh, H. L. Macey, and B. Hillier, 1199.

Singh, P. P.
The chemical constitution of lipid A from *Serratia marcescens*. G. A. Adams and P. P. Singh, 55.

Singhal, R. L.
Metabolic control mechanism in mammalian systems. XI. Pyruvate kinase modulation in the rat prostate and seminal vesicles. R. Vijayvargiya, W. S. Schwark, and L. Singhal, 1268.

Smillie, L. B.
The inhibition of chymotrypsin A_4 with a homologous series of chloromethyl ketone reagents. K. J. Stevenson and L. B. Smillie, 364.
The sulfhydryl groups of muscle phosphorylase. V. The reactive sulfhydryl peptides. C. G. Zarkadas, L. B. Smillie, and N. B. Madsen, 763.

Smith, D. B.
Amide groups of some tryptic peptides from the β-chain of horse hemoglobin. D. B. Smith and W. P. Chung, 1160.

Smith, F. M.
Mg^{2+}-activated ATP hydrolysis and sulfhydryl groups in membranes from human erythrocytes. F. M. Smith and J. A. Verpoorte, 604.

Snyder, F.
Synthesis of glyceryl ethers by microsomal enzymes derived from fibroblasts (L–M cells) grown in suspension cultures. F. Snyder, B. Malone, and R. B. Cumming, 212.

Šodek, J.
Large-scale preparation and some properties of penicillopepsin, the acid proteinase of *Penicillium janthinellum*. J. Šodek and T. Hofmann, 425.
Amino acid sequence around the active site aspartic acid in penicillopepsin. J. Šodek and T. Hofmann, 1014.

Sourkes, T. L.
Regulation of hepatic copper in the rat by the adrenal gland. G. Gregoriadis and T. L. Sourkes, 160.

Spencer, M.
Respiratory control oxidative phosphorylation, respiration, rate of ATP hydrolysis, and ethylene evolution in subcellular particulate fractions from cotyledons of germinating seedlings. R. A. Stinson and M. Spencer, 541.

Srivastava, H. K.
High efficiency of oxidative phosphorylation in mitochondria of wheat. I. V. Sarkissian and H. K. Srivastava, 692.

Stachenko, J.
The effect of temperature and of cofactor concentrations on the conversion of 4-^{14}C-progesterone to corticosterone by rat adrenal preparations. C. P. W. Tsang and J. Stachenko, 740.

Stanacev, N. Z.
Biochemistry of polyglycerophosphatides in central nervous tissue. I. On the biosynthesis, structure, and enzymatic degradation of phosphatidylglycerophosphate and phosphatidylglycero in isolated sheep brain mitochondria. J. B. Davidson and N. Z. Stanacev, 633.
An examination of the relation between endogenous lipid and the activity of the phosphatidylglycerol-forming enzyme system in beef heart mitochondria and microsomes. L. Stuhne-Sekalec and N. Z. Stanacev, 1214.

Stasiw, R. O.
Cholinesterase bonded to paper. R. O. Stasiw, H. D. Brown, and F. X. Hasselberger, 1314.

Steck, W.
Biosynthesis of linear furanocoumarins. S. A. Brown, M. El-Dakhakhny, and W. Steck, 863.
Biosynthesis of angular furanocoumarins. W. Steck and S. A. Brown, 872.

Stevenson, K. J.
The inhibition of chymotrypsin A_4 with a homologous series of chloromethyl ketone reagents. K. J. Stevenson and L. B. Smillie, 364.

Stinson, R. A.
Respiratory control oxidative phosphorylation, respiration, rate of ATP hydrolysis, and ethylene evolution in subcellular particulate fractions from cotyledons of germinating seedlings. R. A. Stinson and M. Spencer, 541.

Strickland, K. P.
On the specificity of cytidine diphosphate diglycerides in monophosphoinositide biosynthesis by rat brain preparations. H. H. Bishop and K. P. Strickland, 269.
Palmitic acid-1-^{14}C oxidation by skeletal muscle mitochondria of dystrophic mice. C. H. Lin, A. J. Hudson, and K. P. Strickland, 566.
Phospholipid metabolism in the molluscs. II. Activities of choline kinase, ethanolamine kinase, and CTP:phosphorylethanolamine cytidyltransferase in the mollusc *Helix lactea*. C.-R. Liang, M. Segura, and K. P. Strickland, 580.

Stuhne-Sekalec, L.
An examination of the relation between endogenous lipid and the activity of the phosphatidylglycerol-forming enzyme system in beef heart mitochondria and microsome L. Stuhne-Sekalec and N. Z. Stanacev, 1214.

Sundaram, P. V.
The urease-catalyzed hydrolyses of some substituted ureas and esters of carbamic acid. P. V. Sundaram and K. J. Laidler, 1132.

Suzuki, I.
Enzymes involved in the metabolism of thiosulfate by *Thiobacillus thioparus*. I. Survey of enzymes and properties of sulfite:cytochrome *c* oxidoreductase. R. M. Lyric and I. Suzuki, 334.
Enzymes involved in the metabolism of thiosulfate by *Thiobacillus thioparus*. II. Properties of adenosine-5′-phosphosulfate reductase. R. M. Lyric and I. Suzuki, 344.
Enzymes involved in the metabolism of thiosulfate by *Thiobacillus thioparus*. III. Properties of thiosulfate-oxidizing enzyme and proposed pathway of thiosulfate oxidation. R. M. Lyric and I. Suzuki, 355.
Kinetic studies of sulfite:cytochrome oxidoreductase, thiosulfate-oxidizing enzyme, and adenosine-5′-phosphosulfate reductase from *Thiobacillus thioparus*. R. M. Lyric and I. Suzuki, 594.

Symonds, V. B.
A comparison of properties of the α-lytic protease of *Sorangium* sp. and porcine elastase. H. Kaplan, V. B. Symonds, H. Dugas, and D. R. Whitaker, 649.

Tan, L,
Biogenetic mechanisms. I. Incorporation of 4-^{14}C-progesterone into gitoxigenin by *Digitalis purpurea*. L. Tan, 216.

Tarrago-Litvak, L.
Biotin and glucose metabolism. K. Dakshinamurti, L. Tarrago-Litvak, and H. C. Hong, 493.

Taussig, A.
The effect of chloramphenicol on the induction of cyanase in *Escherichia coli*. A. Taussig and E. Ronnen, 790.

Taylor, A.
Identification of an intermediate of phloroglucinol degradation by mass spectroscopic analysis. W. D. Jamieson, A. Taylor, D. K. Mathur, and A. C. Blackwood, 215.

Thibert, R. J.
Spectrophotometric determination of gold in biological materials. R. J. Walton, R. J. Thibert, J. Bozic, and W. J. Holland, 823.

Tkachuk, R.
L-Cysteinylglycine: its occurrence and identification. R. Tkachuk, 1029.

Tong, J. H.
A comparison of brain and liver catechol-*O*-methyltransferase. G. D. Rock, J. H. Tong, and A. D'Iorio, 1326.

Tookey, H. L.
Effect of organic reducing agents and ferrous ion on thioglucosidase activity of *Crambe abyssinica* seed. H. L. Tookey and I. A. Wolff, 1024.

Torday, J.
Biosynthesis of 1,2-^{3}H and 4-^{14}C steroid sulfates of high specific activity. J. Torday, G. Hall, M. Schweitzer, and C. J. P. Giroud, 148.

Trevithick, J. R.
A preliminary survey of the effects of some antibiotics on the incorporation of amino acids by a nuclear fraction of young chick blastodiscs. J. R. Trevithick and S. D. Wainwright, 833.

Tsang, C. P. W.
The effect of temperature and of cofactor concentrations on the conversion of 4-^{14}C-progesterone to corticosterone by rat adrenal preparations. C. P. W. Tsang and J. Stachenko, 740.

Tubbs, J. A.
Similar effects by valine and isoleucine on threonine deaminase. W. M. Harding, J. A. Tubbs, and D. McDaniel, 812.

Turnell, R. W.
Corticosteroid metabolism and liver glycogen in fetal and newborn mice. A. F. Burton, R. M. Greenall, and R. W. Turnell, 178.

Uddin, D. E.
Increased serum haptoglobin following exposure to a hyperbaric environment. D. E. Uddin and W. H. Sellers, 1368.

van Huystee, R. B.
Relationship between peroxidase, catalase, and protein synthesis during cellular development in cell cultures of peanut. D. P. S. Verma and R. B. van Huystee, 444.

Vella, F.
Two possible instances of hemoglobin E Saskatoon in Manitoba. A. C. Eng, F. Vella, and C. C. Merry, 45.
Hemoglobin Broussais: $\alpha^{90\ Lys \rightarrow Asn}$. F. Vella, D. Charlesworth, P. A. Lorkin, and H. Lehmann, 908.

Verma, D. P. S.
Relationship between peroxidase, catalase, and protein synthesis during cellular development in cell cultures of peanut. D. P. S. Verma and R. B. van Huystee, 444.

Verpoorte, J. A.
Mg^{2+}-activated ATP hydrolysis and sulfhydryl groups in membranes from human erythrocytes. F. M. Smith and J. A. Verpoorte, 604.

Vidali, G.
Phosphate content of goose erythrocyte histones. G. H. M. Adams, G. Vidali, and J. M. Neelin, 33.

Vijayvargiya, R.
Metabolic control mechanisms in mammalian systems. XI. Pyruvate kinase modulation in the rat prostate and seminal vesicles. R. Vijayvargiya, W. S. Schwark, and R. L. Singhal, 1268.

Vining, L. C.
Preparation of gibberellin A_1-3,4-^{3}H. D. W. Pitel and L. C. Vining, 259.
Partial purification and properties of L-phenylalanine ammonia-lyase from *Streptomyces verticillatus*. A. V. Emes and L. C. Vining, 613.
Accumulation of dehydrofusaric acid and its conversion to fusaric and 10-hydroxyfusaric acids in cultures of *Gibberella fujikuroi*. D. W. Pitel and L. C. Vining, 623.

Viswanatha, T.
Amino-terminal-blocked tripeptide analogues of the active site of α-chymotrypsin. M. Houston and T. Viswanatha, 1.
The role of *N*-acetylcycloserine in the acyl transfer reactions. W. J. D. Whish and T. Viswanatha, 218.
Studies on the aminoxyalanine methyl ester and its α-*N*-acetyl derivative. W. J. D. Whish and T. Viswanatha, 520.
Reaction of amino acids with guanidinating agents. L. C. Allen and T. Viswanatha, 1189.
The activation of chymotrypsinogen by papain. M. C. Shaw, T. Kay, and T. Viswanatha, 1208.

Wainwright, L. K.
A kinetic study of the effects δ-aminolevulinic acid upon the synthesis of embryonic and fetal hemoglobins in the blood islands of the developing chick blastodisc. S. D. Wainwright and L. K. Wainwright, 400

Wainwright, S. D.
A sensitive assay for the hemoglobin content of young developing chick blastodiscs. S. D. Wainwright, 393.
A preliminary survey of the effects of some antibiotics on the incorporation of amino acids by a nuclear fraction of young chick blastodiscs. J. R. Trevithick and S. D. Wainwright, 833.

Wallach, D. P.
Enhancement of the lipolytic activity of skeletal muscle in certain physiological states. D. P. Wallach, 547.

Walton, R. J.
Spectrophotometric determination of gold in biological materials. R. J. Walton, R. J. Thibert, J. Bozic, and W. J. Holland, 823.

Wang, J. H.
A ribosomal-bound aminopeptidase in *Escherichia coli* B: purification and properties. A. J. Dick, A. T. Matheson, and J. H. Wang, 1181.

Wang, M. C.
Combination chemotherapy: treatment of the Ehrlich ascites carcinoma and several drug-resistant sublines with combinations of 6-mercaptopurine and 6-(methylmercapto)purine ribonucleoside. A. R. P. Paterson and M. C. Wang, 79.

Wasley, J. W. F.
Chlorophyllides *c*. J. W. F. Wasley, W. T. Scott, and A. S. Holt, 376.

Wassef, M. K.
Utilization of glycerophosphate for phospholipid synthesis by cells of *Halobacterium cutirubrum*. M. K. Wassef, M. Kates, and D. J. Kushner, 63.
Stereospecificity of the glycerol kinase and the glycerophosphate dehydrogenase in *Halobacterium cutirubrum*. M. K. Wassef, J. Sarner, and M. Kates, 69.

Westhall, C. G.
The regulation of protein synthesis in nephrotic rat kidney ribosome preparations. D. M. Nicholls, M. P. Ryan, S. H. Miall, C. G. Westall, and I. D. Cappon, 308.
The effect of puromycin and aminonucleoside on kidney proteins. D. M. Nicholls, C. G. Westall, and B. D. Aung, 1087.

Westlake, D. W. S.
Fungal metabolism of flavonoids. Purification, properties, and substrate specificity of an inducible laccase from *Polyporus versicolor* PRL 572. M. A. Pickard and D. W. S. Westlake, 1351.

Whish, W. J. D.
The role of *N*-acetylcycloserine in the acyl transfer reactions. W. J. D. Whish and T. Viswanatha, 218.
Studies on the aminoxyalanine methyl ester and its α-*N*-acetyl derivative. W. J. D. Whish and T. Viswanatha, 520.

Whitaker, D. R.
A comparison of properties of the α-lytic protease of *Sorangium* sp. and porcine elastase. H. Kaplan, V. B. Symonds, H. Dugas, and D. R. Whitaker, 649.

Wiberg, G. S.
Biochemical aspects of the interaction of ethanol with barbiturates. H. Locksley Trenholm, W. B. Maxwell, C. J. Paul, G. S. Wiberg, and B. B. Coldwell, 706.

Willemot, C.
Incorporation de la radioactivité du chlorure de (2-chloroéthyl)triméthylammonium 1,2-^{14}C dans la phosphatidylcholine de folioles de luzerne. C. Willemot et L. Belzile, 994.

Wilkinson, D. A.
Glyoxylate aminotransferases from oat leaves. B. L. W. Brock, D. A. Wilkinson, and J. King, 486.

Williamson, D. G.
The metabolism of 17α-estradiol-3-glucoside and 17α-estradiol-3-glucuronoside in the rabbit. D. G. Williamson and D. S. Layne, 523.

Wojtowicz, B. M.
The effect of urea upon the activity measurement of cod muscle cathepsin with hemoglobin substrate. M. B. Wojtowicz and P. Odense, 1050.

Wolfe, B. M. J.
Lipid metabolism in rabbit lungs. B. M. J. Wolfe, B. Anhalt, J. C. Beck, and D. Rubinstein, 170.

Wolff, I. A.
Effect of organic reducing agents and ferrous ion on thioglucosidase activity of *Crambe abyssinica* seed. H. L. Tookey and I. A. Wolff, 1024.

Wrogemann, K.
Defective respiration and oxidative phosphorylation in muscle mitochondria of hamsters in the late stages of hereditary muscular dystrophy. B. E. Jacobson, M. C. Blanchaer, and K. Wrogemann, 1037.
A magnesium-responsive defect of respiration and oxidative phosphorylation in skeletal muscle mitochondria of dystrophic hamsters. K. Wrogemann, M. C. Blanchaer, and B. E. Jacobson, 1332.

Yaguchi, M.
Ion exchange chromatography of 2-amino-2-deoxy-D-hexoses. M. Yaguchi and M. B. Perry, 386.

Yamaguchi, M.
Latent *o*-diphenol oxidase in mushrooms (*Agaricus bisporus*). M. Yamaguchi, P. M. Hwang, and J. D. Campbell, 198.

Yang, A.
Examination of the mineral composition of the micelle of milk by gel filtration. M. Boulet, A. Yang, and R. R. Riel, 816.

Yapo, A.
In vitro synthesis of β-galactosidase by membrane fractions of *Escherichia coli*. W. Chefurka, A. Yapo, and B. Nisman, 893.

Yoshino, Y.
Omega-amino acids in rat brain. Y. Yoshino, F. V. DeFeudis, and K. A. C. Elliott, 147.
Incorporation of carbon atoms from glucose into free amino acids in brain under normal and altered conditions. Y. Yoshino and K. A. C. Elliott, 228.
Effects of various conditions on the movement of carbon atoms derived from glucose into and out of protein in rat brain. Y. Yoshino and K. A. C. Elliott, 236.
Protein-bound amide groups in brain. Y. Yoshino and K. A. C. Elliott, 1175.

Zarkadas, C. G.
The sulfhydryl groups of muscle phosphorylase. V. The reactive sulfhydryl peptides. C. G. Zarkadas, L. B. Smillie, and N. B. Madsen, 763.

Zbarsky, S. H.
Deoxyribonucleic acid polymerase from nuclei of rat intestinal mucosa. F. Y. T. Leung and S. H. Zbarsky, 529.
Terminal deoxyribonucleotidyltransferase from nuclei of rat intestinal mucosa. F. Y. T. Leung and S. H. Zbarsky, 537.
Partial purification of phosphodiesterase I from microsomes of rat intestinal mucosa. I. Hynie and S. H. Zbarsky, 1141.
Some properties of phosphodiesterase I from microsomes of rat intestinal mucosa. I. Hynie and S. H. Zbarsky, 1151.

Zitko, V.
Phospholipids. IV. Studies on the antithromboplastic activity of phosphatidylserine preparations and their derivatives. V. Zitko, A. Okany, and L. Palagy, 1318.

CANADIAN JOURNAL OF BIOCHEMISTRY, VOLUME 48

SUBJECT INDEX

Page numbers refer to the pages where the indexing terms appear

Absidia coerulea
  protein synthesis, 858

Absorption coefficient
  chlorophillide c, 378

Acetoacetate
  palmitate oxidation, 420

Acetyl L alanyl L alanyl L alanine methyl ester
  elastase, 384
  kinetics, 385
  pH, 385

N Acetyl L aspartic acid
  acetate, 209
  alloxan diabetes, 208
  biosynthesis, 207
  brain homogenate, 207
  dog, 207
  fluoroacetic acid, 209
  pancreatectomy, 208
  rat, 207

Acetylcholine
  glutamate dehydrogenase, 204

Acetylcholinesterase
  N,N dimethyl 2 phenylaziridinium, 244
  erythrocyte, 244
  kinetics, 245
  pH, 246

Acetyl CoA carboxylase
  bovine serum albumin, 917
  citrate, 917
  cold inactivation, 918
  epidermal adipose tissue, 915
  $HgCl_2$, 917
  rat, 915

N Acetyl cycloserine
  acyl transfer reaction, 218
  cinnamoylimidazole, 218
  para nitrophenyl acetate, 218
  pH, 219

Actinomycin
  cyanase induction, 793

Actinomycin D
  polyoma virus, 1106
  polyribosome associated RNA, 1106
  RNA polymerase, 561

Adenine
  adenine phosphoribosyltransferase, 295
  tRNA methylase, 703

Adenine 8' deoxyallofuranoside
  adenine phosphoribosyltransferase, 573

Adenine derivative
  tRNA methylase, 702

Adenine nucleoside
  adenine phosphoribosyltransferase, 573

Adenine nucleotide
  adenine phosphoribosyltransferase, 573

Adenine N oxide
  tRNA methylase, 703

Adenine phosphate
  tRNA methylase, 703

Adenine phosphoribosyltransferase
  adenine, 295
  adenine analog inhibition, 297
  adenine nucleoside, 573
  adenosine 5' acetate, 575
  adenosine diphosphate, 575
  adenosine monophosphate, 575
  adenosine 2' phosphate, 575
  adenosine 3' phosphate, 575
  adenosine 5' phosphoramidate, 575
  adenosine 5',3' phosphoridine, 575
  adenosine triphosphate, 575
  N bromo succinimide, 299
  2',3' cyclic adenosine monophosphate, 575
  deoxy adenosine monophosphate, 575
  Ehrlich ascites tumor, 295
  fructose 1,6 diphosphate, 578
  heat inactivation, 578
  inhibition, 573
  kinetics, 295
  magnesium, 302
  magnesium PP ribose P mechanism, 302
  5' O trityladenosine, 575

Adenine sulfate
  tRNA methylase, 703

Adenosine 5' acetate
  adenine phosphoribosyltransferase, 575

Adenosine diphosphate
  adenosine phosphoribosyltransferase, 575
  inorganic pyrophosphate, 1304

Adenosine monophosphate
  adenine phosphoribosyltransferase, 575
  inorganic pyrophosphate phosphorylase A, 748

deoxy Adenosine monophosphate
  adenosine phosphoribosyltransferase, 575

Adenosine 2' phosphate
  adenine phosphoribosyltransferase, 575

Adenosine 3' phosphate
  adenine phosphoribosyltransferase, 575

Adenosine 5' phosphoramidate
  adenine phosphoribosyltransferase, 575

Adenosine 5',3' phosphoridine
  adenine phosphoribosyltransferase, 575

Adenosine 5' phosphosulfate
  arsenite, 352
  atabrin, 352
  2,2' bipyridyl, 352
  ethyl diamine tetra-acetate, 352
  N ethylmaleimide, 352
  ortho phenanthroline, 352

Adenosine 5'phosphosulfate reductase
  para chloromercuribenzoate, 352
  cytochrome C, 347
  D. desulfuricans, 353
  ferricyanide, 347
  kinetics, 596
  mercuric chloride, 352
  nucleotide specificity, 348
  pH, 348
  product inhibition, 597
  purification, 345
  reaction mechanism, 601
  spectrum, 346
  sulfite, 348
  T. denitrificans, 353
  thiobacillus reductase, 344
  T. thioparus, 353, 594
  thiosulfate, 344

Adenosine triphosphatase
  aging, 544
  chloramphenicol, 472
  ethylene evolution, 545
  F_1 coupling activity, 1079
  wheat mitochondria, 697

Adenosine triphosphate
  adenosine phosphoribosyltransferase, 575
  alkyl ether bond, 213
  amino acid incorporation, 834

Adenosine triphosphate, continued
glycerol kinase, 71
inorganic pyrophosphatase, 1304
palmitate 1 C^{14} oxidation, 568
protein synthesis, 116

Adenosine triphosphate hydrolysis
para chloromercuribenzoate, 606
cotyledons, 541
N ethylmaleimide, 606
germinating seedlings, 514
magnesium activation, 604
pH, 605
sulfhydryl groups, 604

S Adenosylethionine
tRNA methylase, 702

Adenylate kinase
wheat mitochondria, 697

Adipose tissue
acetyl CoA carboxylase, 915
amino acid incorporation, 113
fatty acid, 1228

Adipose tissue ribosome
sucrose gradient, 117

ADP
see Adenosine diphosphate

ADP/O ratio
see P/O ratio

Adrenal gland
hepatic copper, 160
18 hydroxycorticosterone, 553
steroid biosynthesis, 85

Adrenal slice
corticosterone synthesis, 740

Adrenalectomy
serum ceruloplasmin, 161
tyrosine aminotransferase, 14

Adrenaline
catechol O methyltransferase, 1330
glutamate dehydrogenase, 204

Aflatoxicol
production aflatoxin B_1, 831

Aflatoxin B_1
transformation, 831

Aflatoxin B_1 reduction
Dactylium dendroides, 831

Alanine
brain, 229
Se methyl selenocystine, 1281

beta Alanine
gamma amino beta hydroxybutyrate, 147

L Alanine
pyruvate kinase, 1269

Alanine:glyoxylate aminotransferase
assay, 487

Albumin
see also Bovine serum albumin
estradiol, 1192

Alcohol dehydrogenase
Astasia longa, 256
maximal velocity, 708
Michaelis constants, 708
pentobarbital, 707
rat liver, 706

Alcohol extraction
phosphodiesterase I purification, 1148

Aldolase
chicken brain, 322, 331
purification, properties, 322

Aldolase, brain
see Brain aldolase

Aldosterone fraction
separation, 87
teleost fish, 556

Alfalfa leaflets
chloride incorporation, 994

Alkyl ether bond
long chain fatty alcohol, 213

Alkylation
phosphorylase b, 764

Allosamine
cation exchange resin, 387

Alloxan diabetes
N acetyl L aspartic acid, 208
biotin, 493

Allylurea
cerease, 1134

Altrosamine
cation exchange resin, 387

Amide group
brain, 1174
protein bound, 1174

Amino acid
Aspergillus flavus growth, 1172
cell free system, 735
chymotrypsin A4, 367
guanidinating agent, 1189
incorporation, 735
posterior pituitary, 455

omega Amino acid
brain, 147

Amino acid analysis
carboxypeptidase A, 7
haptoglobin, 124

Amino acid, brain
see Brain amino acid

Amino acid composition
rat brain, 237

Amino acid extraction
phenylthiohydantoin, 439

Amino acid, free
see Free amino acid

Amino acid incorporation
adenosine triphosphate, 834
chloramphenicol, 835
cycloheximide, 116
cycloheximidine, 835
fasting, 113
puromycin, 116
rat adipose tissue, 113

Amino acid sequence
haptoglobin alpha 2, 140
haptoglobin alpha chain, 133
penicillopepsin, 1014
trifluoroacetyl haptoglobin alpha 15, 140

Amino acyl tRNA
phenylthiohydantoin, 439

Amino acyl tRNA synthetase
Halobacterium cutirubrum, 944
low ionic strength solutions, 945

4 Amino butyric acid
brain, 229
postmortem changes, 229

2 Amino deoxy D hexose
ion exchange chromatography, 386

Aminoglutethimide phosphate
cholesterol depletion, 881

Aminohydroxyacetic acid
brain amino acid, 231

gamma Amino hydroxybutyrate
beta alanine, 147

delta Aminolevulinic acid
embryonic hemoglobin, 400

Amino nucleoside
kidney proteins, 1087
L leucine incorporation, 859
liver polysomes, 39
phenyl alanyl tRNA incorporation, 861
puromycin, 39

Aminopeptidase
dithiothreitol, 1185
Escherichia coli B, 1181
Escherichia coli ribosome, 1292
beta mercaptoethanol, 1186
properties, 1181
purification, 1181
ribosomal, 1181
substrate specificity, 1292

Aminopeptidase, ribosome
see Ribosome aminopeptidase

Aminoxyalanine methyl ester
alpha N acetyl derivative, 520
cinnamoyl imidazole, 520

Ammonia
rat brain, 1174

Ammonium chloride
aminopeptidase purification, 1183

Amobarbital
NADH oxidase, 474

AMP
see Adenosine monophosphate

dAMP
see deoxy Adenosine monophosphate

Amytal
see Amobarbital

Angular furanocyanins
biosynthesis, 872

Anoxia
see Hypoxia

Antibody
double hemoglobin, 192

Antithromboplastic activity
phosphatidyl serine, 1318

Apo transferrin
serum iron, 1345

Arabinosyl adenine
murine tumor cell, 75

Arabinosyl hypoxanthine
murine tumor cell, 75

Arsenite
adenosine 5' phosphosulfate reductase, 352

Ascites carcinoma
chemotherapy, 79
6 mercaptopurine, 79
6 (methylmercapto)purine ribonucleoside, 79

Ascites fluid
haptoglobin, 123

Ascites tumor
DNA polymerase, 76
incubation media, 517
nucleic acid synthesis, 518

Ascites tumor cell protein synthesis
chloramphenicol, 472

Ascites tumor cell respiration
chloramphenicol, 472

Ascorbate
phenol oxidase, 319
peroxidase, 319, 1195
serum iron, 1343

Ascorbate-PMS oxidase activity
inhibition 2 heptyl 4 hydroxyquinoline N oxide, 780
inhibition by KCN, 780

Ascorbic acid
para hydroxyphenylpyruvic acid oxidase, 1179
tyrosine, 1179

Aspartate trans carbamylase
catalase, 157
pyrimidine-specific carbamylphosphate synthetase, 155
temperature, 156
UTP, 156

Aspartic acid
brain, 1176

L Aspartic acid diethyl ester hydrochloride
synthesis, 2

Aspergillic acid
similar compounds biosynthesis, 1165

Aspergillus flavus
growth, 1172
1 hydroxy 2(1H) pyrazinone, 1165

Astragalus bisulcatus
Se methyl seleno cysteine, 1278

Astasia longa
alcohol dehydrogenase, 256
mitochondrial enzyme, 254
paramylon, 252
protein content, 252
in vitro, 252

Atabrine
see Mepacrine

Atebrin
see Mepacrine

ATP
see Adenosine triphosphate

Aurothioglucose
mouse muscle lipase activity, 549

8 Aza-adenine
tRNA methylase, 703

Bacteria protein synthesis
chloramphenicol, 479

Bacteriophage growth
temperature, 48

Bacteriophage RNA
host cell, 51
synthesis, 51

Barbiturate
ethanol, 706

Barium hydroxide
peptide hydrolysis, 3

Bentonite
protein synthesis, 1224

Benzimidazole
folate content, 1091

alpha N Benzoylamino acid amide
physical constants, 1125

alpha N Benzoylamino acid methyl ester
infrared bands, 1124

alpha N Benzoyl ε N carbobenzoxy DL homolysine
preparation, 1123

alpha N Benzoyl DL homolysine H_2O
preparation, 1123

alpha N Benzoyllysine
2,4,6 trinitrobenzenesulfonic acid, 1256

alpha N Benzoyl ε N, ε N, ε N trimethyl L lysine
preparation, 1123

beta Benzyl N benzyloxycarbonyl aspartic acid
synthesis, 1

beta Benzyl N benzyloxycarbonyl L aspartyl L serylglycine benzyl ester
synthesis, 2

Benzylchloromethyl ketone
synthesis, 365

N Benzyloxycarbonyl Asp-Ser-Gly
synthesis, 1

N Benzyloxycarbonyl Gly-Asp-Ser
synthesis, 1

N Benzyloxycarbonyl glycyl aspartic acid
synthesis, 2

N Benzyloxycarbonyl glycyl L aspartic acid diethyl ester
synthesis, 2

N Benzyloxycarbonyl glycyl aspartic anhydride
synthesis, 2

N Benzyloxycarbonyl glycyl aspartyl serine ethyl ester
synthesis, 2

N Benzyloxycarbonyl serine
synthesis, 1

Beryllium
phosphodiesterase I, 1154

Bile acid methyl L ester
thin layer chromatography, 1055

Bile salt
quantitative estimation, 1054
serum, 1054

Biological material
gold determination, 823

Biotin
alloxan diabetes, 493
enzyme induction, 496
glucose metabolism, 493

2,2' Bipyridyl
adenosine 5' phosphosulfate reductase, 352
sulfite cytochrome C' oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

Blastodisk
amino acid incorporation, 833
chick, 400
chick embryo, 393
hemoglobin, 393
hemoglobin synthesis, 401

Blood cell
regeneration, 34

Blood clotting
esterase, 436

Blood coagulation
see Blood clotting

Blue dextran 2000
dextranase, 225
hydrolysis, 225

Borate
ceronic acid isomerase, 166

Borate citrate buffer
ion exchange chromatography, 388

Bovine serum albumin
acetyl CoA carboxylase, 917

Brain
omega amino acid, 147
ammonia, 1176
aspartic acid, 1167
catechol O methyltransferase, 1326
DOPA, 1287
dopamine, 1287
glutamate dehydrogenase, 203
glutamic acid, 1167
glutamine, 1176
monophosphoinositide, 269
phosphatidyl serine, 1318

Brain aldolase
amino acid composition, 331
chicken, 322, 331
kinetics, 329
molecular weight, 327

Brain amino acid
147, 237
amino oxyacetic acid, 231
hypoxia, 233
pentobarbital, 233
picrotoxin, 233

Brain cortex, visual
see Visual cortex

Brain mitochondria
phosphatidylglycerol, 633
phosphatidylglycerophosphate, 633

Brain protein
glucose carbon, 236
rat, 236

Brain tissue
polyglycerophosphatide, 633

Calycin
pulvinic acid incorporation, 1241

Carbamic acid ester
urease, 1132

Carbon deprivation
Astasia longa, 251
oxygen toxicity, 251

Carbon dioxide fixation
glutamic acid synthesis, 463

Carbon phosphorus bonds
proton nuclear magnetic resonance spectroscopy, 991

Carboxylase
preparation, 915

Carboxylase activity
assay, 915

Carboxypeptidase a
amino acid analysis, 7
characterization, 7
isolution, 7
new form, 7
pancreas, 7
phenanthroline, 10
beta phenylpropionate, 10
SH inhibitor, 10
zinc, 7

Carcinoma, ascites
see Ascites carcinoma

Carnitine
liver mitochondria, 420

Carnitine palmitoyltransferase
fatty acid oxidation, 288
liver age, 290

Catalase
aspartate trans carbamylase, 157
estradiol conjugation, 1195
peanut development, 444
pyrimidine specific carbamyl phosphate synthetase, 157

Catalytic reduction
apparatus, 261

Catechol
cytochrome C_1, 935

Catechol O methyltransferase
adrenaline, 1330
assay, 1326
brain, 1326
para chloromercuribenzoate, 1330
3,5 diiodo 4 hydroxybenzoic acid, 1330
iodoacetic acid, 1330
liver, 1326
properties, 1326
purpurogallin, 1330
pyrogallol, 1330
beta thujaplicin, 1330
tropolone, 1330

Cathepsin
cod, 1054
muscle, 1054
pH, 1052
urea, 1054

Cation exchange resin
allosamine, 387
altrosamine, 387
galactosamine, 387
glucosamine, 387
gulosamine, 387
mannosamine, 387
talosamine, 387

CDP diglyceride inositol transferase
assay, 270
intracellular distribution, 272
optimal conditions, 272
preparation, 270
specificity, 274

Cell free system
amino acid incorporation, 735
rat liver, 735

Cell membrane fraction
beta galactosidase, 893

Cell nucleus
isolation, 559
preservation, 559
RNA polymerase activity, 559

Cell respiration
Astasia longa, 254

Cell 3T3
mouse, 851
SV40 transformation, 851

Cell, tumor
see Tumor cell

Cephalin, phosphonic acid analog
779
synthesis, 979

Ceramide AEP
Helix lactea, 581

Cerease
allyl urea, 1134

Ceruloplasmin
deoxycorticosterone, 162
hydrocortisone, 162

Chelating agent
peroxidase synthesis, 318
phosphodiesterase I, 1153

Chemotherapy
drug resistance, 81
Ehrlich ascites carcinoma, 79

Chloramphenicol
adenosine triphosphatase, 472
amino acid incorporation, 835
analog, 469
ascites tumor cell, 472
bacterial protein synthesis, 479
cyanase induction, 790
isomer, 469
mitochondria, 469
mitochondria protein synthesis, 479
RNA synthesis, 795

Chloramphenicol analog
glutamate dehydrogenase, 475
mitochondrial protein synthesis, 481
NADH oxidation, 473
succinate oxidase, 473

Chloride
sulfite cytochrome C oxidoreductase, 340

Chloride incorporation
alfalfa leaflets, 994
phosphatidylcholine, 994

11 Chloro 10 hydroxyfusaric acid
Giberella fujikuroi, 626
isolation, 626

para Chloromercuribenzoate
adenosine 5' phosphosulfate reductase, 352

para Chloromercuribenzoate, continued
catechol O methyltransferase, 1330
sulfite cytochrome C oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

para Chloromercuribenzoic acid
pyruvate kinase, 1275

Chloromethyl ketone reagent
chymotrypsin A4 inhibition, 364

Chlorophenoxyisobutyrate
lipid metabolism, 1022

Chlorophyll A
chlorophyllide, 381

Chlorophyllide
chlorophyll A, 381
chloroporphyrin, 382
dioxane, 379

Chlorophyllide C
absorption coefficient, 378
methyl ester, 378
magnesium pheoporphyrin, 377
Phaeodactylum tricornutum, 376
pigment separation, 377

Chloroplast
folate content, 1091

Chloroporphyrin
chlorophyllide, 382

Chloroporphyrin C_1
chloroporphyrin C_2, 378

Cholesterol
biosynthesis, 1022

Cholesterol deprivation
aminoglutethimide phosphate, 881
intermixing hormone, 881

Cholesterol ester
lung lipid, 172

Cholestyramine
lipid metabolism, 1022

Choline
serum lipid, 1234

Choline deficiency
fatty liver, 1284
lipid, 1234
phosphatidylethanolamine, 885

Choline kinase
assay, 580
Helix lactea, 580
molluscs, 580

Choline phosphoglyceride
Helix lactea, 581

Cholinesterase
bonded to paper, 1314
thermal stability, 1316

Chondroitin sulfate monosaccharide
uronic isomerase, 168

Chromatography, Dorvex ion exchange
see Dorvex ion exchange chromatography

Chromatography, ion exchange
see Ion exchange chromatography

Chromatography, thin layer
see Thin layer chromatography

Chymotrypsin
active site, 671
conformational probe, 676
deamination rate constants, 677
guanidinium chloride, 678
inactivation, 671
nitrous acid, 671
N terminal isoleucine, 671

alpha Chymotrypsin
active site, 1
active site titration, 676
amino acid composition, 673
free alpha amino group interaction, 1058
nitrous acid, 673
phenyl alanine interaction, 1058
thrombin, 435
tripeptide analog, 1

Chymotrypsin A4
amino acid analysis, 367
chloromethyl ketone reagent, 364

alpha Chymotrypsin activity
pH dependence, 1060

Chymotrypsin P
amino acid composition, 1211

Chymotrypsinogen
activation, 1208
papain, 1208

Chymotrypsinogen A
nitrous acid, 675

Cinnamoylimidazole
N acetyl cycloserine, 218
aminoxyalanine methylester, 520

Circular dichroism
mengo virus, 940
ribonucleates, 940

Citrate
acetyl CoA carboxylase, 317
serum iron, 1343

Co A SH
see Coenzyme A

Coenzyme A
alkyl ether bond formation, 213
palmitate 1 C^{14} oxidation, 567

Cold inactivation
acetyl CoA carboxylase, 918

Cold exposure
muscle lipase, 549

Copper
kidney, 161
liver, 160
peroxide, 1195
pyruvate kinase, 1271

Copper, kidney
see Kidney copper

Copper, liver
see Liver copper

Copper sulfate
intraperitoneal injection, 161

Cornitine
palmitate 1 C^{14} oxidation, 567

Corticosteroid
fetal mouse, 178
liver, 178
liver glycogen, 178
newborn mouse, 178

separation, 741
thin layer chromatography, 741

Corticosterone
adrenal gland, 87
conversion of progesterone, 740
isolation, 91
liver copper, 162
liver glycogen, 181

Cortisol
see Hydrocortisone

Cotyledon
adenosine triphosphate hydrolysis, 541
ethylene evolution, 541
germinating seedlings, 541
mitochondria, 541
oxidative phosphorylation, 541
respiration, 541
respiratory control, 541
subcellular fractions, 541

Cotyledon mitochondria
ADP/O ratio, 543
aging, 541
ethylene evolution, 545
preparation, 542

Coupling factor
electron transfer, 1080
subunits, 1079

Crambe abyssinica
thioglucosidase, 1024

Cu
see Copper

Cyanase activity
determination, 790

Cyanase induction
actinomycin, 793
chloramphenicol, 790
Escherichia coli, 790

Cyanide
peroxidase, 1195

2',3' Cyclic adenosine monophosphate
adenosine phosphoribosyltransferase, 575

Cyclitol
algae, 699

Cycloheximide
amino acid incorporation, 116, 835

L Cysteinylglycine
identification, 1029
wheat germ, 1029

Cysteinylglycine (difluoroacetyl ester)
mass spectrum, 1034

Cytidine diphosphate diglyceride
monophosphoinositide, 269

Cytochrome C
adenosine 5' phosphosulfate reductase, 347
thiosulfate oxidizing enzyme, 359

Cytochrome C^1
catechol, 935
superoxide anion, 935

Cytoplasmic granule
posterior pituitary, 455

Cytosine triphosphate phosphorylethanolamine cytidyltransferase
assay, 581
Helix lactea, 580
molluscs, 580

Dactylium dendroides
aflatoxin B_1 reductase, 831

D. desulfuricans
adenosine 5' phosphosulfate reductase, 353

(+) Decanoyl carnitine
palmitate oxidation, 292

Dehydroascorbate
phenol oxidase, 319

11 Dehydrocorticosterone
preparation, 91

Dehydroepiandrosterone
essential hypertension, 1308
isolation, 1309
secretion rate, 1308

Dehydroepiandrosterone sulfate
essential hypertension, 1308
secretion rate, 1308

Dehydrofusaric acid
culture condition, 624
fusaric acid, 623
Giberella fujikuroi, 623
10 hydroxyfusaric acid, 623
isolation, 624
metabolism, 628

Deoxycholate
polysome isolation, 40

Deoxycorticosterone
ceruloplasmin, 162
liver copper, 162
synthesis, 91

11 Deoxycortisol
isolation, 91

2 Deoxymyoinositol
algae, 699
identification, 699
Monochrysis lutheri, 699

Deoxyribonucleotide triphosphate
DNA polymerase, 533

Deoxyribonucleotidyl transferase
intestinal mucosa, 537
nuclei, 537
terminal, 537

Detergent
ortho diphenol oxidase, 200

Dextran 2000, blue
see Blue dextran 2000

Dextranase
blue dextran 2000, 225
pH, 226
rapid assay, 225

Dextrin
transglucosylation, 1263

Dextrose
uronic acid isomerase, 165

Dialkylether phospholipids
chemical synthesis, 585
model compound, 585

DL 2,8 Diamino octanoic acid hydrochloride
preparation, 1123

Dietary magnesium
liver ribonuclease, 23

Diether alpha (N,N dimethyl) cephalin
phosphoro lipid, 184

Diether alpha (N,N dimethyl) phosphonocephalin
synthesis, 184

Diethyldithio carbamate
peroxidase, 318
phenol oxidase, 318

Diglyceride
lung lipid, 172

Dihexadecyl (alpha glyceryl N,N dimethyl 2 aminoethyl) phosphonate
synthesis, 185

Dihydrofolate
degeneration products identification, 1001
oxidative degradation, 999

Dihydrophloroglucinol
mass spectroscopy, 215

Dihydroxyacetone phosphate
glycero lipid, 213

20 beta Dihydroprogesterone
biosynthesis, 409

Dihydropteridine
quinonoid, 278

7,8 Dihydropteridine
quinonoid dihydropteridine, 278

3,5 Diiodo 4 hydroxybenzoic acid
catechol O methyltransferase, 1330

6 Dimethyladenine
tRNA methylase, 703

Dimethylallyladenine
tRNA methylase, 703

D alpha beta Di O methyl alpha benzylglycerol
characterization, 587
preparation, 587

1,2 Dimethyl 3 benzyl sn glycerol
characterization, 587
preparation, 587

1,2 Dimethyl sn glycerol
characterization, 588
preparation, 588

D alpha beta Di O methyl glycerol
characterization, 588
preparation, 588

Di O methyl L alpha glycerophosphorylcholine cadmium chloride complex
characterization, 591
preparation, 591

1,2 Dimethyl sn glycero 3 phosphorylcholine
characterization, 590
preparation, 590

1,2 Dimethyl sn glycero 3 phosphorylcholine cadmium chloride complex
characterization, 591
preparation, 591

Di O methyl L alpha glyceryl phosphorylcholine
characterization, 590
preparation, 590

2,4 Dinitro 1 fluorobenzene
elastase, 1253

2,4 Dinitrophenyl sulfonyl chloride
ethyl 3 indoleacetate, 665
5 hydroxy 3 indoleacetic acid, 665
3 indoleacetamide, 665
3 indoleacetic acid, 665
3 indoleacetone, 665
3 indoleacetonitrile, 665
3 indolebutyric acid, 665
3 indole ethanol, 665
DL 3 indolelactic acid, 665
3 indolepropionic acid, 665
indoles, 664
melatonin, 665
serotonin, 665
tryptamine, 665

2 (2,4 Dinitrophenylthio)indole derivative
physical properties, 665
preparation, 664

D alpha beta Di O octadecyl alpha benzyl glycerol
characterization, 586
preparation, 586

1,2 Dioctadecyl 3 benzyl sn glycerol
characterization, 586
preparation, 586

D alpha beta Di O octadecyl glycerol
characterization, 586

1,2 Dioctadecyl sn glycerol
characterization, 586

1,2 Dioctadecyl sn glycerol 3 diphenyl phosphoric acid
characterization, 588
preparation, 588

1,2 Dioctadecyl sn glycero 3 (methyl)phosphorylcholine
characterization, 589
reparation, 589

1,2 Dioctadecyl sn glycero 3 phosphoric acid
characterization, 588
preparation, 588

Di O octadecyl L alpha glycero phosphoric acid
characterization, 588
preparation, 588

Di O actadecyl L alpha glycero phosphoric acid diphenyl ester
characterization, 588
preparation, 588

Di O octadecyl alpha glyceryl (N,N dimethyl 2 aminoethyl)phosphonate
infrared spectrum, 186
synthesis, 185

Di O octadecyl L alpha glyceryl (methyl)phosphorylcholine
preparation, 589

Dioxane
chlorophyllides, 379

ortho Diphenicol oxidase
assay, 199
detergents, 200
latency, 198
lauryl sulfate sodium, 199
mushroom distribution, 201
mushroom strains, 198
preparation, 198
storage, 199

Disk gel electrophoresis
haptoglobin hemoglobin mixture, 195

Dissociation constant
phosphorylase A, 749

Ditetradecyl (alpha glyceryl N,N dimethyl 2 aminoethyl)phosphonate
synthesis, 185

Dithiothreitol
amino peptidase, 1185

Divalent metal
inorganic pyrophosphatase, 1305
phosphodiesterase I, 1153

DNA nucleotidyl transferase
assay, 530

DNA polymerase
ascites tumor, 76
assay, 76
deoxyribonucleotide triphosphate, 533
DNA template, 533
intestinal mucosa, 529
magnesium, 533
pH optimum, 534
purification, 530
rat nuclei, 529
sedimentation coefficient, 533
Stokes radius, 532
sulfhydryl reagent, 533
terminal deoxyribonucleotidyl transferase, 538

DNA-RNA hybrid
calf thymus, 501
endonuclease resistance, 501
purification, 501

DNA, single stranded
see Single stranded DNA

DNA template
DNA polymerase, 533

DOPA
brain, 1287
para tyramine, 1287

Dopamine
brain, 1287
para tyramine, 1287

Double hemoglobin
antibody reaction, 192
preparation, 193

Dowex ion exchange chromatography
haptoglobin alpha chain, 134

Dystrophy
hamster, 1332
mouse, 566
muscle mitochondria, 566, 1332

EDTA
see Ethyl diamine tetra acetic acid

Ehrlich ascites carcinoma
see Ascites carcinoma

Ehrlich ascites tumor
see Ascites tumor

Elastase
acetyl L alanyl L alanyl L alanine methyl ester, 384
2,4 dinitro 1 fluorobenzene, 1253
pH, 1255
synthesis, 7

Elastase, pancreas
see Pancreas elastase

Elastase, porcine
see Porcine elastase

Electron transfer
F_1-effect, 1080

Electrophoresis, disk
see Disk gel electrophoresis

Embryo
glycoprotein synthesis, 1082

Endonuclease
DNA-RNA hybrid, 501
Neurospora crana, 389
RNA synthesis, 503
single stranded DNA, 389
specificity, 390

Endotoxin
amino acid analysis, 508
Microcystis aeruginosa NRC-1, 508
new isolation, 508
structure, 508

Enzyme adaptation
tyrosine aminotransferase activity, 1043

Enzyme induction
artichoke tubes, 316
oxidation, 316
uronic acid isomerase, 165

Epicorticosterone
liver glycogen, 181

Epidermis
acetyl CoA carboxylase, 315
adipose tissue, 315

Epinephrine
see Adrenaline

Erythrocyte
acetylcholinesterase, 244
bovine, 244
goose, 33
histone, 33
human, 604

Erythrocyte membrane
604
adenosine triphosphate hydrolysis, 604
alkali extraction, 608
amino acid composition, 608
para chloromercuribenzoate, 607
5,5' dithio bis(2 nitrobenzoic acid) 609
extraction, 607
sulfhydryl groups, 604

Erythrocyte membrane extract
amino acid composition, 608

Escherichia coli
amino peptidase, 1181
cyanase induction, 790
beta galactosidase, 893
non heme iron, 777
RNA phage R17, 47

Escherichia coli protein
N terminal sequence, 1295

Essential hypertension
dehydroepiandrosterone secretion, 1308
dehydroepiandrosterone sulfate secretion, 1308

Esterase
canine serum, 1359
clotting, 436

Esterase, continued
human, 975
human lung, 970
inhibitors, 975

Esterase activity
N acyl substituted amino acid methyl ester, 652
amino acid methyl ester, 652
N substituted amino acid ester, 654

Esterase, serum
see Serum esterase

Estradiol
albumin, 1192
catalase, 1195
thiol, 1192

17 alpha Estradiol
glycoside, 524

17 alpha Estradiol 3 glucoside
rabbit, 523

Ethanol
barbiturate, 706
liver slice, 709
transglucosylation, 1264

Ethanolamine kinase
assay, 580
Helix lactea, 580
molluscs, 580

Ethanolamine phosphoglyceride
Helix lactea, 581

Ethyl carbamate
see Urea

Ethyl diamine tetra acetic acid
adenosine 5' phosphosulfate reductase, 352
peroxidase, 1195
sulfite cytochrome C oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

Ethylene evolution
adenosine triphosphatase activity, 545
aging, 545
analysis, 542
cotyledon, 541
cotyledon mitochondria, 545
germinating seedling, 541
respiratory control, 545

Ethylene glycol
transglucosylation, 1264

Ethyl 3 indoleacetate
2,4 dinitrophenyl sulfonyl chloride, 665

N Ethylmaleimide
adenosine 5' phosphosulfate reductase, 352
sulfite cytochrome C oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

Ethylpulvinate C^{14}
preparation, 1242

Ethylurea
urease, 1134

F_1
see Coupling factor

Fast muscle mitochondria
oxidative phosphorylation, 27

Fasting
polyuridine incorporation, 119

Fatty acid
larval lipid, 264
phosphatidyl serine, 1322
rat brain monophosphoinositide, 271

Fatty acid oxidation
carnitinepalmitoyl transferase, 288
chick embryo, 418
fetal rat, 288
liver, 288

Fatty acid synthesis
adipose tissue, 1228
glucose, 1230
glycerol, 1232
insulin, 1228
lactate, 1229
pyruvate, 1229

Fatty liver
choline deficiency, 1284
phenobarbital, 1284

Fe
see Iron

Ferricyanide
adenosine 5' phosphosulfate reductase, 347
thiosulfate oxidizing enzyme, 359

Ferrobacillus ferro-oxidans
pyrophosphatase, 1302

Fibroblast culture
glyceryl ether synthesis, 212

Flavobacterium heparinum
uronic acid isomerase, 164

Flavonoid
fungal metabolism, 1351

Fluoride
ribonuclease, 450
ribosome, 450

Fluoroacetic acid
N acetyl L aspartic acid, 209

Folate
chloroplast, 1091
wheat leaf, 1091

Formylurea
urease, 1134

Free amino acid
brain, 228
peanut cell mass, 448

Freezing
RNA polymerase activity, 563

Fructose 1,6 diphosphate
pyruvate kinase, 1269

Fructuronic acid
uronic acid isomerase, 166

Furanocoumarin
biosynthesis, 863

Furanocyanins, angular
see Angular furanocyanins

Furylacryloylimidazole
reaction with peptide, 3

Fusaric acid
culture conditions, 624
dehydrofusaric acid, 623

Gibberella fujikuroi, 623
isolation, 624
metabolism, 628

GABA
see 4 Amino butyric acid

Galactosamine
cation exchange resin, 387

beta Galactosidase
Escherichia coli, 893
induction, 857
membrane fractions, 893
synthesis, 893

beta Galactosidase induction
puromycin, 902

Galacturonic acid
uronic isomerase, 167

Gel filtration
DNA polymerase, 532

Gene
haptoglobin, 123

Germinating seedling
adenosine triphosphate hydrolysis, 541
cotyledons, 541
ethylene evolution, 541
mitochondria, 541
oxidative phosphorylation, 541
respiration, 541
respiratory control, 541
subcellular fractions, 541

Gibberella fujikuroi
11 chloro 10 hydroxyfusaric acid, 626
dehydrofusaric acid, 623
fusaric acid, 623
10 hydroxyfusaric acid, 623

Gibberellin A_1 3,4 H^3
preparation, 259

Gibberellin A_3
structure, 260

Gitoxigenin
Digitalis purpurea, 216
isolation, 217
progesterone, 216

Glacial acetic acid
beta lipotropic hormone, 511

Globulin S 12
amino acid analysis, 1101
glycoprotein component, 1096
preparation, 1096
rape seed, 1096
N terminal amino acid, 1100

Glucokinase
induction, 496
insulin, 497
liver, 493

Glucosamine
cation exchange resin, 387

Glucose
amino acid, 228
Astasia longa, 254
biotin, 493
fatty acid synthesis, 1230
plasma NEFA, 422
uronic isomerase, 167

Glucose C^{14}
intravenous injection, 236
brain protein, 236
incorporation in amino acids, 228

Glucose cyclo acetoacetate hydrolysate
tyrosine oxidation, 1178

Glucose 6 phosphatase
liver age, 290

1 thio beta D Glucosiduronic acid
synthesis, 799

Glucuronic acid
uronic acid isomerase, 165

beta Glucuronidase
rat liver, 799
synthetic 1 thio beta D glucosiduronic acid substrate, 799

Glutamate dehydrogenase
acetylcholine, 204
adrenaline, 204
age, 204
cerebral hemisphere, 205
noradrenaline, 204
rat brain, 203
serotonin, 204

Glutamate synthesis
CO_2 fixation, 463
Krebs cycle, 466
rumen, 463
rumen micro-organism, 465

Glutamic acid
brain, 1176
degradation, 464
protein bound, 239

Glutamic dehydrogenase
chloramphenicol analog, 475

Glutamic pyruvic transaminase
liver age, 290

Glutamine
brain, 1176

Glutathione
estradiol conjugation, 1193

Glyceraldehyde 3 phosphate
glycerolipid, 213

Glycerol
fatty acid synthesis, 1232
transglucosylation, 1264

Glycerol incorporation
lung lipid, 172

Glycerol kinase
adenosine triphosphate, 71
assay, 70
Halobacterium cutirubrum, 69
stereo specificity, 69
subcellular distribution, 71

Glycerolipid
dihydroxyacetone phosphate, 213
glyceraldehyde 3 phosphate, 213
microsome, 212

Glycerophosphatase
assay, 64
phospholipid, 63

alpha Glycerophosphate
uptake, 66

L Glycero 3 phosphate
phosphatidylglycerol synthesis, 1215

Glycerophosphate dehydrogenase
assay, 70
Halobacterium cutirubrum, 69
stereo specificity, 69
subcellular distribution, 72

alpha Glycerophosphate shuttle
muscle mitochondria, 29

L alpha Glyceryl 2 aminoethyl phosphate
nuclear magnetic resonance spectrum, 992

Glyceryl ether synthesis
fibroblast culture, 212

L alpha Glyceryl(N methyl 2 aminoethyl)phosphonate
synthesis, 989

Glycine benzyl ester para toluene sulfonate
synthesis, 1

Glycine 2 oxoglutarate amino transferase
assay, 487

Glycogen
assay, 178
chain length determination, 178

Glycogen, liver
see Liver glycogen

Glycogen phosphorylase
kinetic constants, 752

Glycoprotein
biosynthesis, 1082
embryonic, 1082
globulin S 12, 1096

Glycoside
17 alpha estradiol, 524

Glyoxylate aminotransferase
oat leaf, 486
pyridoxal phosphate, 489
specificity, 490

Gold determination
biological materials, 823
plasma, 824
spectrophotometry, 824
urine, 824

Ground squirrel
hibernation, 549
lipase activity, 549

Guanidinating agent
amino acid, 1189

Halobacterium cutirubrum
amino acyl tRNA synthetase, 944

Hamster
hibernation, 549
lipase activity, 549

Haptoglobin
amino acid analysis, 124
antigen antibody reaction, 192
ascites fluid, 123
gene action, 123
hyperbaric environment, 1368
isolation of alpha chain, 123
separations of chains, 127

Haptoglobin alpha 2
amino acid sequence, 140

Haptoglobin alpha chain
amino acid sequence, 133
Dowex ion exchange chromatography, 134
isolation, 123
molecular weight, 130
peptide separation, 134
trifluoroacetylation, 133

Haptoglobin beta chain
isolation, 123

Haptoglobin complex
hemoglobin, 192

Haptoglobin hemoglobin mixture
disk gel electrophoresis, 195

H_b beta chain
see Hemoglobin beta chain

Helix lactea
ceramide AEP, 581
choline kinase, 580
choline phosphoglyceride, 581
cytosine triphosphate:phosphorylethanolamine cytidyltransferase, 580
ethanolamide phosphoglyceride, 581
serine phosphoglyceride, 581

Hemoglobin
blasto disk, 393, 398
alpha chain mutant, 1066
delta aminolevulinic acid, 400
haptoglobin complex, 192
hemoglobin Broussais, 308
hemoglobin Manitoba, 911
horse, 1160
mouse, 192
peroxidase activity, 396
sensitive assay, 393
starch gel electrophoresis, 1371
subunits, 192

Hemoglobin beta chain
amino acid composition, 1373
papain peptide, 1162
tryptic peptide, 1160

Hemoglobin Broussais
fingerprint, 910

Hemoglobin, double
see Double hemoglobin

Hemoglobin E
peptide analysis, 45

Hemoglobin E Saskatoon
two patients, 45

Hemoglobin J Bangkok
one case, 1370
newborn, 1370

Hemoglobin Mahidol
hemoglobin alpha chain mutant, 1066

Hemoglobin Manitoba
amino acid composition, 913
arginine (extra), 911
fingerprint, 912

Hemoglobin synthesis
chick blasto disk, 400
in vitro, 401

Hemoglobinopathy
alpha chain mutant, 1066

Heparin
desulfation, 726

metabolism, 726
sulfamidase, 725
uronic acid isomerase, 165

Heparin monosaccharide
uronic isomerase, 168

Heparin precipitation
human serum, 712
lipoproteins, 712
rat serum, 712

Heparin sulfamidase
assay, 726
dog, 727
heart, 727
ileum, 727
ions, 731
kidney, 727
lung, 727
lymphoid tissue, 725
man, 727
Michaelis constant, 728
pH optimum, 728
preparation, 725
rat, 727
spleen, 727
substrate specificity, 728
temperature optimum, 728
tissue distribution, 727

HEPES
see N 2 Hydroxyethyl piperazine N 2 ethane-sulfonic acid

2 Heptyl 4 hydroxyquinoline N oxide
ascorbate PMS oxidase activity, 780
redox state respiration chain components, 780

Hereditary muscular dystrophy
muscle mitochondria, 1037
oxidative phosphorylation, 1037
respiration, 1037

Hexosamine
lipid A, 59

Hexosamine binding
inflammation, 844

Hibernation
ground squirrel, 549
hamster, 547
muscle lipase activity, 549

Histidine containing peptide
purification, 365

Histone
erythrocyte, 33
fractionation, 33
phosphate, 33
phosphorylation, 36

Homoarginine δ chymotrypsin
nitrous acid, 675

Homolysine derivative
trypsin kinetics, 1122

House cricket
larval lipid, 264

Humps, salmon
see Salmon humps

Hyaluronic acid monosaccharide
uronic isomerase, 168

Hydrocortisone
ceruloplasmin, 162
fasting, 180
liver copper, 162
phosphoenolpyruvate carboxykinase, 1299
tyrosine aminotransferase, 13, 1299

Hydrogenation
methyl chlorophyllide, 381

beta Hydroxybutyrate
palmitate oxidation, 423

beta Hydroxybutyrate oxidation
D chloramphenicol, 470
L chloramphenicol, 470

18 Hydroxycorticosterone
adrenocortical tissue, 553
biosynthesis, 553
exogenous corticosterone, 553
identification, 555
isolation, 555
steroid biosynthesis, 87

N 2 Hydroxyethyl piperazine N 2 ethane sulfonic acid
quinonoid dihydropterin, 281

10 Hydroxyfusaric acid
dehydrofusaric acid, 623
Gibberella fujikuroi, 623
isolation, 627

5 Hydroxy 3 indole acetic acid
2,4 dinitrophenyl sulfonyl chloride, 665

11 beta Hydroxylase activity
G6P concentration, 742
nicotinamide adenine dinucleotide phosphate concentration, 742
progesterone, 742

para Hydroxyphenylpyruvate oxidase
ascorbic acid, 1179
glucose cycloacetoacetate hydrolysate, 1179

1 Hydroxy 2(1H) pyrazinones
Aspergillus flavus, 1165
isolation, 1166
proton magnetic resonance spectra, 1167

11 beta Hydroxysteroid: nicotinamide adenine dinucleotide phosphate oxidoreductase
liver glycogen, 178

Hyperbarism
haptoglobin, 1368

Hypertension, essential
see Essential hypertension

Hypophysectomy
amino acid incorporation, 828
orotic acid incorporation, 828
phosphoenolpyruvate carboxykinase, 1299
small bowel, 828
thymidine incorporation, 828
tyrosine aminotransferase, 1299

Hypophysis
beta lipolytic hormone, 1017

Hypophysis, posterior
see Posterior hypophysis

Hypoxia
brain amino acid, 233
protein bound amino acid, 240

Iduronic acid
uronic isomerase, 167

Imidazole
quinonoid dihydropterin, 282

Immunoelectrophoresis
serum iron protein, 1346

Immunoglobulin G myeloma protein
atypical, 784
conformation, 784
papain digestion, 784

3 Indole acetamide
2,4 dinitrophenyl sulfonyl chloride, 665

DL 3 Indoleacetic acid
2,4 dinitrophenyl sulfonyl chloride, 665

3 Indoleacetone
2,4 dinitrophenyl sulfonyl chloride, 665

3 Indoleacetonitrile
2,4 dinitrophenyl sulfonyl chloride, 665

3 Indolebutyric acid
2,4 dinitrophenyl sulfonyl chloride, 665

3 Indole ethanol
2,4 dinitrophenyl sulfonyl chloride, 665

3 Indolepropionic acid
2,4 dinitrophenyl sulfonyl chloride, 665

Indoles
2,4 dinitrophenylsulfonyl chloride, 664
identification, 664, 671
separation, 664

Inflammation
hexosamine binding, 844
hexose binding, 843
L leucine incorporation, 847
rat, 841
serum proteins, 841

Infrared spectrum
dioctadecyl L alpha glyceryl (N,N dimethyl 2 amino ethyl)phosphonate, 186
alpha phosphotidic acids, 1012

Inorganic pyrophosphatase
divalent metals, 1305
magnesium, 1305
metabolic inhibitor, 1305
properties, 1303
purification, 1303
wheat mitochondria, 697

Insoluble RNA
electrophoresis, 1115
yeast, 1115

Insulin
fatty acid synthesis, 1228
free amino acid, 241
liver glucokinase, 497

Intestinal mucosa
deoxyribonucleotidyl transferase, 537
DNA polymerase, 529
microsomes, 1141
rat, 529, 1141

Iodoacetamide
peroxidase, 1195

Iodoacetic acid
catechol O methyltransferase, 1330

Ion exchange chromatography
2 amino 2 deoxy D hexose, 386
borate-citrate buffer, 388

Iron
adenosine 5' phosphosulfate reductase, 347
fractionation, 1343
human serum, 1339
low molecular weight liquid, 1332
transferrin, 1332

Iron ligand
purification, 1341

Iron, non heme
see Non heme iron

Iron, serum
see Serum iron

Isocitrate
palmitate 1 C^{14} oxidation, 568

Isocitric dehydrogenase (NADP)
divalent metal, 98
effect of heat, 97
effects of Krebs cycle intermediates, 99
kinetics, 97
nucleotide, 101
phosphate, 97
substrate specificity, 98
sulfhydryl inhibition, 100

Isoleucine
thionine deaminase, 812

Isopentyladenosine
tRNA methylase, 703

Isopropanol
transglucosylation, 1264

Isotopic exchange
rate equations, 922

5 Ketogluconic acid
uronic isomerase, 167

4 Ketoglutarate
palmitate 1 C^{14} oxidation, 568

alpha Ketoglutarate oxidation
2,4 dinitrophenol, 697

Kidney copper
161

Kinetic mechanism
phosphorylase a, 746

Kidney protein
aminonucleoside, 1087
puromycin, 1087

Kidney ribosome
preparation, 308
protein synthesis, 105
sucrose density gradient, 108

Krebs cycle
glutamate synthesis, 466

Labile sulfide
adenosine 5' phosphosulfate reductase, 347

Laccase
induction, 1351
polyporus versicolor PRL, 572, 1351
properties, 1351
purification, 1351

Lactate
fatty acid synthesis, 1229
serum iron, 1343

Lactone
uronic isomerase, 167

Larval lipid
fatty acid composition, 264
house cricket, 264
neutral lipid content, 265
phospholipid content, 265

Leucine incorporation
peanut, 445

Leucine C^{14} incorporation
fasting, 115

L Leucine incorporation
aminonucleoside, 859
inflammation, 847

Lichen
Pseudocyphellaria crocata, 1241

Linear furanocoumarin
synthesis, 866

Lipase
ground squirrel, 549
hamsters, 549

Lipase activity, muscle
see Muscle lipase activity

lipid
lung, 172
phosphatidylglycerol, 1214
rabbit, 170
separation, 637

Lipid A
aminocompounds, 57
chemical constitution, 55
fatty acids, 58
hexosamine, 59
infrared spectrum, 59
methylation, 58
preparation, 56
Serratia marcescens, 55

Lipid composition
salmon humps, 839

Lipid, liver
see Liver lipid

Lipid, lung
see Lung lipid

Lipid metabolism
chlorophenoxyisobutyrate, 1022
cholestyramine, 1022

Lipid, neutral
see Neutral lipid

Lipid, serum
see Serum lipid

Lipid storage
pink salmon, 837

Lipid synthesis
divalent cations, 636
pH optimum, 636
subcellular distribution, 635
temperature, 636

Lipolytic activity
skeletal muscle, 547

Lipolytic hormone
isolation, 1019
pig, 1019

beta Lipolytic hormone
pituitary gland, 1017

Lipopolysaccharide
composition, 57
preparation, 56

Lipoprotein
electrophoresis, 713
heparin precipitation, 712
immunodiffusion, 713
immunoelectrophoresis, 713

alpha Lipoprotein
beta lipoproteins, 719

beta Lipoprotein
density, 719
alpha lipoproteins, 719
beta melanophore stimulating hormone, 512
sheep pituitary gland, 511

Lipoprotein components
dissociation, 712
recombination, 718
very low density lipoproteins, 712

Lipoprotein, very low density
see Very low density lipoprotein

beta Lipotropic hormone
chemical stability, 511
extraction, 511
glacial acetic acid, 511

Liver
ascorbic acid, 1179
catechol O methyltransferase, 1326
cell free system, 735
copper, 160
glucokinase, 493
guinea pig, 1178
nephrotic rat, 1222
phosphatidylethanolamine, 885
rat, 659, 735
tyrosine aminotransferase, 13
tyrosine aminotransferase activity, 1043

Liver copper
adrenal gland, 160
corticosterone, 162
deoxycorticosterone, 162
hydrocortisone, 162

Liver, fatty
see Fatty liver

Liver glycogen
corticosteroid, 178
epicorticosterone, 181
11 beta hydroxysteroid nicotinamide adenine dinucleotide phosphate oxidoreductase, 178
protein diet, 1299

Liver homogenate
steroid sulfate synthesis, 148

Liver lipid
analysis, 886
choline deficiency, 1234

Liver mitochondria
fatty acid oxidation, 420
mono amino oxidase, 18, 659
rat, 659

Liver polysome
amino nucleoside, 39
rat, 39

Liver ribosome
preparation, 22
sucrose density gradient, 107

Long chain fatty alcohol
alkyl ether bond, 213

Lung
esterase, 970
human, 970

Lung lipid
glycerol incorporation, 172
palmitate incorporation, 172

Luteinizing hormone
cholesterol depleting, 881
rat ovary, 881

Lymphoid tissue
heparin sulfamidase, 725

Lysine
see under alpha N Benzoyl

Lysophosphatidyl choline
lung lipid, 173

alpha Lytic protease
N acyl L alanine methyl esters, 652
bacteriolytic activity, 652
N benzoylamino acid methyl esters, 652
bromomethyl ketone, 655
chloromethyl ketone, 655
elastolytic activity, 652
esterase activity, 652
imidazole groups, 654
optical rotation, 651
pH, 655
porcine elastase, 649
properties, 649
N n propyloxycarbonyl L alanine esters, 654
reaction mechanism, 655
sorangium sp, 649
specificity, 652
temperature stability, 652

Magnesium
adenine phosphoribosyltransferase, 302
alkyl ether bond formation, 213
DNA polymerase, 533
inorganic pyrophosphatase, 1305
oxidative phosphorylation, 1332
protein synthesis, 116
ribosomal protein synthesis, 109

Magnesium chloride
acetyl CoA carboxylase, 917

Magnesium deficiency
ribonuclease, 21

Magnesium pheoporphyrin
chlorophyllide C, 377

Magnesium PP ribose P
adenine phosphoribosyltransferase, 302

Malate
palmitate 1 C^{14} oxidation, 568

Malvalic acids
reactions, 759

Manganese
estradiol conjugation, 1193
peroxidase, 1193

Mannosamine
cation exchange resin, 387

Mass spectrometry
cysteinylglycine (difluoroacetyl ester), 1034

Mass spectroscopy
dihydrophloroglucinol, 215

beta Melanophore stimulating hormone
beta lipoprotein, 512

Melatonin
2,4 dinitrophenyl sulfonyl chloride, 665

Mengo virus
circular dichroism, 940
ribonucleases, 940

Mengo virus RNA
melting curve, 413

Mengo virus variant
absorbance temperature profile, 412
dextran sulfate sedimentation, 412
total infectious particle ratio, 412

Mepacrine
adenosine 5' phosphosulfate reductase, 352

6 Mercaptoadenine
tRNA methylase, 703

beta Mercaptoethanol
amino peptidase, 1186

6 Mercaptopurine
ascites carcinoma, 79

Mercuric chloride
adenosine 5' phosphosulfate reductase, 352
sulfite cytochrome C^1 oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

MES
see 2 (N Morpholino)ethanesulfonic acid

messenger RNA
see mRNA

Metabolic inhibitor
inorganic pyrophosphatase, 1305

Methanol
transglucosylation, 1264

Methionine methyl C^{14}
lung phospholipid, 174

Methionine S phenacyl sulfonium chloride
synthesis, 365

Methionine sulfonium salt peptide
purification, 366

6 Methoxyadenine
tRNA methylase, 703

6 Methyladenine
tRNA methylase, 703

2' O Methylated RNA
Saprospira grandis, 1199

Methyl carbamate
urease, 1136

L alpha N Methylcephalin
phosphoric acid analog, 221

Methylchlorophyllide C_2
absorption spectrum, 379

S Methylcysteine
Astragalus bisulcatus, 1278
biosynthesis, 1278

epsilon N Methyllysine
trypsin kinetics, 1122

6 (Methylmercapto)purine ribonucleoside
ascites carcinoma, 79

Methyl pheoporphyrin C_1
absorption spectrum, 379

Methyl pheoporphyrin C_2
absorption spectrum, 379

Se Methylselenocysteine
iosynthesis, 1278

Methylurea
urease, 1134

Microsome
intestinal mucosa, 1141

Middle ultraviolet spectrum
protein model compounds, 953
proteins, 953

Milk micelles
mineral composition, 816

Mineral composition
milk micelles, 816

Mitochondria
cotyledons, 541
germinate seedlings, 541
rat liver, 659
wheat, 692

Mitochondria, brain
see Brain mitochondria

Mitochondria, cotyledon
see Cotyledon mitochondria

Mitochondria enzyme
Astasia longa, 254

Mitochondria, fast muscle
see Fast muscle mitochondria

Mitochondria, liver
see Liver mitochondria

Mitochondria, muscle
see Muscle mitochondria

Mitochondria oxidation
reduced nicotinamide adenine dinucleotide, 30

Mitochondria protein synthesis
chloramphenicol, 479

Mitochondria, slow muscle
see Slow muscle mitochondria

Mitochondria, wheat
see Wheat mitochondria

Mollusc
choline kinase, 580
cytosine triphosphate phosphorylethanolamine cytidyltransferase, 580
ethanolamine kinase, 580
phospholipid metabolism, 580

Monoamine oxidase
benzylamine, 659
brain, 189
electrophoresis, 661
heart, 188
inhibition, 187
liver mitochondria, 188
Michaelis constants, 660
multiplicity, 659
pentobarbital sodium, 187
rat, 187
rat liver mitochondria, 659
serotonin, 659
para tyramine, 1289

Monoglyceride
lung lipid, 172

Monophosphoinositide
biosynthesis, 269
cytidine diphosphate diglyceride, 269
rat brain, 269

2 (N Morpholino)ethane sulfonic acid
quinonoid dihydropterin, 282

Multifunctional enzyme complex
heat induced disaggregation, 155
pyrimidine biosynthesis, 155

Multi substrate enzymic reactions
non steady state analysis, 805

Murine tumor cell
arabinosyl adenine, 75
arabinosyl hypoxanthine, 75

Muscle
lipolytic activity, 547

Muscle fraction
protein content, 551

Muscle lipase activity
aurothioglucose treated mouse, 549
cold exposure, 549
hibernation, 549
muscular dystrophic mouse, 549
obese hyperglycemic mouse, 549

Muscle mitochondria
dystrophic mice, 566
dystrophy, 1332
alpha glycero phosphate shuttle, 29
hereditary muscular dystrophy, 1037
oxidative phosphorylation, 27, 1332
palmitic acid 1 C^{14} oxidation, 566

Muscle phosphorylase
sulfhydryl groups, 763

Muscular dystrophy
mouse, 549
muscle lipase activity, 549

Muscular dystrophy, hereditary
see Hereditary muscular dystrophy

Myeloma, immunoglobulin G protein
see Immunoglobulin G myeloma protein

Myoinositol
algae, 699
identification, 699
Monochrysis lutheri, 699

NADH
see Reduced nicotinamide adenine dinucleotide

NADP
see Nicotinamide adenine dinucleotide phosphate

Nephrosis
polysome profile, 313
protein synthesis, 109, 308
ribonuclease, 313, 1226
rat, 1226

Neutral lipid
larval lipid, 265
lung, 172

Nicotinamide
steroid synthesis, 91

Nicotinamide adenine dinucleotide
mitochondria oxidation, 30

Nicotinamide adenine dinucleotide phosphate specific isocitrate dehydrogenase
enzyme purification, 96
pH optimum, 97
properties, 95
Thiobacillus novellus, 95

para Nitrophenyl acetate
N acetyl cycloserine, 218

para Nitrophenyl alpha D glucose
ransglucosylation, 1263

Nitrous acid
conformational probe, 676
thrombin amino acid composition, 434
thrombin inactivation, 433

Non heme iron
Escherichia coli, 777
ortho phenanthroline, 781
respiration chain, 777

Noradrenaline
glutamate dehydrogenase, 204

Norepinephrine
see Noradrenaline

Nucleic acid synthesis
ascites tumor, 518

Nucleotide
adenosine 5' phosphosulfate reductase, 348
isocitric dehydrogenase, 101

Nucleotide formation
cell free extract, 76

Nucleus, cell
see Cell nucleus

Oat leaf
glyoxylate aminotransferase, 486

Obese hyperglycemic mouse
muscle lipase activity, 549

Optical rotation
pH, 651

Orotic acid incorporation
mucosa, 828
small intestine, 828

Orthophenanthroline
adenosine 5' phosphosulfate reductase, 352
carboxypeptidase A, 10
non heme iron reduction, 781
sulfite cytochrome C oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

Ostruthol
synthesis, 870

Ovary
rat, 881

Oxaloacetate
palmitate 1 C^{14} oxidation, 568

Oxidation
enzyme induction, 316

Oxidative degradation
dihydrofolate, 999
tetrahydrofolate, 999

Oxidative phosphorylation
1332
cotyledons, 541
efficiency, 692
germinate seedlings, 541
hamster, 1037
hereditary muscular dystrophy, 1037
magnesium, 1332
microbial contamination, 696
mitochondria, 692
red muscle mitochondria, 27
white muscle mitochondria, 27

Oxygen toxicity
251
carbon deprivation, 251

Palmitate incorporation
lung lipids, 172

Palmitate oxidation
292
acetoacetate, 420
chick embryo, 419
beta hydroxybutyrate, 423
liver age, 291

Palmitate 1 C^{14} oxidation
adenosine triphosphate, 568
carnitine, 567
coenzyme A, 567
cofactor requirements, 567
isocitrate, 568
alpha ketoglutarate, 568
malate, 568
muscle mitochondria, 566
oxaloacetate, 568
succinate, 568

Pancreas
carboxypeptidase A, 7

Pancreas elastase
2,4,6 trinitrobenzenesulfonic acid, 1249

Pancreatectomy
N acetyl L aspartic acid, 208

Papain
chymotrypsinogen, 1208

Papain digestrin
atypical IgG myeloma protein, 784

Papain peptide
hemoglobin beta chain, 1162

Paramylon
Astasia longa, 252

Pasteur effect
thrombogenic diet, 224

Penicillamine
pyruvate kinase, 1274

Penicillopepsin
acid proteinase, 425
active site, 1014
amino acid sequence, 1014
crystallization, 431
large scale preparation, 425
Penicillium janthinellum, 425
properties, 425
C terminal amino acid, 429
N terminal amino acid, 428

Pentaerythritol
transglucosylation, 1264

Pentobarbital
alcohol dehydrogenase, 707
brain, 1177
brain amino acid, 233
liver slices, 709
nicotinamide adenine dinucleotide, 710
protein bound amino acid, 240

Pentobarbital sodium
monoamine oxidase, 187

Pentylenetetrazole
protein bound amino acid, 240

Peptide analysis
hemoglobin beta chain, 1163
hemoglobin E, 45

Peptide hydrolysis
barium hydroxide, 3

Peptide separation
haptoglobin alpha chain, 134

Peroxidase
ascorbate, 1195
copper, 1195
cyanogen, 1195
ethyl diamine tetra acetic acid, 1195
N ethylmaleimide, 1195
hemoglobin, 396
iodoacetamide, 1195
Jerusalem artichoke, 317
manganese, 1193
peanut development, 444

pH
acetylcholinesterase, 246
adenosine 5' phosphosulfate reductase, 348
deoxyribonucleotidyltransferase, 538
phosphodiesterase I, 1151
phospholipase D, 645
porcine elastase, 655
protozoa aldolase, 152
quinonoid dihydropteridine, 280

pH effect
cathepsin activity, 1052
beta NADH, 947

Phenobarbital
fatty liver, 1284

Phenoloxidase
diethyldithiocarbamate, 318

Phenylalanine incorporation
nephrotic rat, 1224

L Phenylalanine
pyruvate kinase inhibition, 1270

L Phenylalanine ammonia lyase
analog, 619
assay, 614
ethyl diamine tetra acetic acid, 618
inhibitors, 619
isoelectric point, 616
metal ions, 619
Michaelis constant, 616
molecular weight, 618
partial purification, 613
pH optimum, 616
product analog, 619
properties, 613
reduced glutathione, 618
sedimentation coefficient, 617
specificity, 619
stability, 616
Stokes radius, 616
Streptomyces verticillatus, 613

L Phenylalanine ester
Michaelis constant, 1095

Phenylalanyl tRNA
aminonucleoside, 861
nephrotic kidney, 312

Phenyl alpha D glucose
transglucosylation, 1263

beta Phenylethylchloromethyl ketone
synthesis, 365

beta Phenylpropionate
carboxypeptidase A, 10

Phenylthiohydantoin
439
amino acid extraction, 439
aminoacyl tRNA, 439
cell free protein synthesis, 438
liquid phase method, 440
salt effect, 441
solid phase method, 441

Phloroglucinol
dihydrophloroglucinol, 215

Phosphatase
Halobacterium cutirubrum, 66

Phosphate
histone, 33
isocitrate dehydrogenase (NADP), 97
sulfite cytochrome C oxidoreductase, 340
uronic acid isomerase, 166

Phosphatidyl choline
chloride incorporation, 994
lung lipid, 172

Phosphatidyl N,N dimethylethanolamine
lung lipid, 172

Phosphatidylethanolamine
choline deficiency, 885
liver, 885
lung lipid, 172

Phosphatidylglycerol
beef heart microsome, 1214
beef heart mitochondria, 1214
biosynthesis, 633
brain mitochondria, 633
endogenous lipid, 1214
enzymatic degradation, 633
fatty acid composition, 639
L glycero 3 phosphate, 1215
identification, 637
phospholipase C, 639
phospholipase D, 638
rat spleen, 639
reaction mechanism, 640
sheep brain, 633
structure, 633

Phosphatidylglycerophosphate
biosynthesis, 633
brain mitochondria, 633
enzymatic degradation, 633, 640
identification, 639
reaction mechanism, 640
sheep brain, 633
structure, 633

Phosphatidylserine
1318
antithromboplastic activity, 1318
lung lipid, 172

Phosphodiesterase
assay, 1142
urea, 1148

Phosphodiesterase I
beryllium, 1154
chelating agent, 1153
divalent metals, 1153
intestinal mucosa, 1151
Michaelis constant, 1156
non ionic compound, 1155
partial purification, 1141
pH optimum, 1151
properties, 1151
subcellular distribution, 1142
sulfhydryl compound, 1154
thermostability, 1152
urea, 1156

Phosphoenolpyruvate carboxykinase
cortisol, 1299
protein diet, 1299
regulation, 1297
tyrosine aminotransferase, 1297

Phosphofructokinase
glycolysis, 222

Phospholipase D
characterization, 643
chelating agents, 646
choline, 644
divalent cations, 646
identification, 643
lecithin, 644
pH optimum, 645
Porphyridium cruentum, 643
red algae, 643
substrate concentration, 645
sulfhydryl reactive agents, 647

Phospholipid
choline deficiency, 1235
glycerophosphate, 63
larval lipid, 265
liver microsome, 1235
lung, 172

Phospholipid metabolism
molluscs, 580

Phospholipid synthesis
Halobacterium cutirubrum, 63

Phosphonic acid analog
phosphonolipid, 184

Phosphonolipid
analog synthesis, 184
cephalin analogs, 979
diether L alpha (N,N dimethyl)cephalin, 184
metabolites, 988
phosphonic acid analog, 184

Phosphoric acid analog
L alpha (N methyl)cephalins, 221

Phosphorylase a
adenosine monophosphate, 748
dissociation constant, 749
isotope exchange studies, 755
kinetic mechanism, 746
rabbit, 746

Phosphorylase b
ethylation, 764

Phosphorylation
histone, 36

Phosphorylethanolamine C^{14}
preparation, 581

alpha Phosphotidic acid
infrared spectra, 1010
synthesis, 1010

Picrotoxin
brain, 1177
brain amino acid, 233
protein bound amino acid, 240

Pink salmon
see also Salmon
lipid storage, 837

Piericidin A
redox state, respiration chain components, 780

Pituitary gland
see Hypophysis

Plasma
gold determination, 824

Plasma free fatty acid
glucose, 422

P/O ratio
cotyledon mitochondria, 543
germinating seedlings, 543
wheat mitochondria, 543

Polyglycerophosphatides
central nervous tissue, 633

Polyoma virus
actinomycin D, 1106
replication, 1106
RNA synthesis, 1104

Polyribosome
preparation, 40

Polyribosome associated RNA
actinomycin D, 1106

Polyribosome associated mRNA
polyoma virus, 1106

Polysome
preparation, 735

Polysome, liver
see Liver polysome

Polysome structure
ribonuclease, 21
ultra centrifugation, 22

Polyuridine
ethylene glycol, 688
hydrogen bonding, 688
magnesium, 685
nephrotic kidney, 311
ribosomes 70 S, 685
temperature dependency, 686

Polyuridine incorporation
fasting, 119

Porcine elastase
N acyl L alanine methyl esters, 652
N benzoylamino acid methyl esters, 652
bromomethyl ketone, 655
chloromethyl ketone, 655
elastolytic activity, 652
esterase activity, 652
alpha lytic protease, 649
pH, 655
properties, 649
N n propyloxycarbonyl L alanine esters, 654
reaction mechanism, 655
specificity, 652
temperature stability, 652

Posterior hypophysis
amino acid characterization, 455
cytoplasmic granules, 455

Potassium ferricyanide
pterin oxidation, 280

Pregn 4 ene
biosynthesis, 148

Pregnenolone
oxidation, 407

Procion brilliant DEAE cellulose
cholinesterase, 1314

Procion brilliant orange
cholinesterase, 1314

Progesterone
conversion to corticosterone, 740
gitoxigenin, 216
11 beta hydroxylase activity, 742
oxidation, 407

Progesterone conversion
temperature, 743

Progesterone synthesis
leg muscle Gryllus assimilis, 408

n Propanol
transglucosylation, 1264

Propylene glycol
aminopeptidase inhibition, 1185

1,2 Propylene glycol
transglucosylation, 1264

1,3 Propylene glycol
transglucosylation, 1264

Prostate
pyruvate kinase, 1268

Protein
middle ultraviolet spectra, 953

Protein bound glutamic acid
several brain parts, 239

Protein, brain
see Brain protein

Protein diet
liver glycogen, 1299
phosphoenolpyruvate carboxykinase, 1299
tyrosine aminotransferase, 1299

Protein hydrolysis
grain, 1174

Protein model compound
middle ultraviolet spectra, 955

Protein, ribosome
see Ribosome protein

Protein S1
amino acid analysis, 1101

Protein, serum
see Serum protein

Protein synthesis
Absidia coerulea, 858
adenosine triphosphate, 116
bentonite, 1224
Escherichia coli, 49
kidney ribosome, 105
liver polysome, 42
liver ribosome, 1222
magnesium, 109
nephrotic kidney, 109, 308
nephrotic rat, 1222
peanut development, 444
phenylthiohydantoin, 438
puromycin aminonucleoside, 858
transferase I and II effect of, 736
viral RNA R17, 438

Proton magnetic resonance spectrum
1 hydroxy 2(1H)pyrazinone, 1167

Proton nuclear magnetic resonance spectroscopy
carbon phosphorus bonds, 991

Protozoan aldolase
Leishmania donovani, 151
pH, 152

Pterin oxidation
K_3 Fe(CN)6, 280

Pulvinic acid
calycin, 1241
chemical identification, 1242

Purine
tRNA methylase, 703

Purine synthesis
de novo, 519

Puromycin
amino acid incorporation, 116, 835
aminonucleoside, 39
beta glactosidase induction, 902
kidney proteins, 1087

Puromycin aminonucleoside
protein synthesis, 858

Purpurogallin
catechol O methyltransferase, 1330

Pyridoxal phosphate
glyoxylate aminotransferase, 489

Pyrimidine specific carbamylphosphate synthetase
aspartate transcarbamylase, 155
catalase, 157
temperature, 156
uridine triphosphate, 156

Pyrimidine synthesis
bakers yeast, 155
first step catalysis, 155
multifunctional enzyme complex, 155

Pyrogallol
catechol O methyltransferase, 1330

Pyrophosphatase
Ferrobacillus ferro oxidans, 1302

Pyruvate
fatty acid synthesis, 1229
serum iron, 1343

Pyruvate kinase
L alanine, 1269
para chloromercuribenzoic acid, 1275
copper, 1271
fructose 1,6 diphosphate, 1269
penicillamine, 1274
L phenylalanine, 1270
rat prostate, 1268
seminal vesicle, 1268

QNO
see 2 Heptyl 4 hydroxyquinoline N oxide

Quinonoid dihydropteridine
7,8 dihydropteridine, 278

Quinonoid dihydropteridine, continued
N 2 hydroxyethyl piperazine N 2 ethane sulfonic acid, 281
pH, 280

Quinonoid dihydropterin rearrangement
deuterium effect, 284
temperature, 283

Rate equation
computer based derivation, 922
enzyme catalyzed reactions, 922
isotopic exchange, 922

Red muscle
see Slow muscle

Redox state respiration chain components
2 heptyl 4 hydroxyquinoline N oxide effect, 780
piericidin A effect, 780

Reduced nicotinamide adenine dinucleotide
nuclear magnetic resonance studies, 947
pH effects, 947
spectroscopic analysis, 947

Reduced nicotinamide adenine dinucleotide oxidase
amytal, 474
rotenone, 474

Reduced nicotinamide adenine dinucleotide oxidation
chloramphenicol, 471
chloramphenicol analog, 473

Reduction potential
tetrahydropterin, 526

Respiration
cotyledons, 541
germinating seedlings, 541
hereditary muscular dystrophy, 1037

Respiratory chain
non heme iron, 777

Respiratory control
aging, 543
cotyledons, 541
ethylene evolution, 545
germinating seedlings, 541
wheat mitochondria, 694

Rhapidosome
Saprospira grandis, 1200
ultrastructure, 1200

Ribonuclease
circular dichroism, 940
corn root, 450
cytoplasmic subcellular distribution, 453
denaturation blue shift, 965
fluoride, 450
guinea pig, 21
inhibition, 21
kidney, 111
liver, 111
magnesium deficiency, 21
mengo virus, 940
nephrotic kidney, 313
nephrotic rat, 1226
pancreas, 504
polysome structure, 21

Ribonuclease activity
assay, 22

Ribonuclease inhibitor
assay, 22
liver supernatant, 107

Ribosome
aminopeptidase, 1181
corn root, 450
fluoride, 450
nephrotic kidney, 313
preparation, 683
sucrose gradient profile, 451

Ribosome, adipose tissue
see Adipose tissue ribosome

Ribosome aminopeptidase
dipeptide, 1293
tetrapeptide, 1294
tripeptide, 1294

Ribosome binding
assay, 684

Ribosome isolation
fasting effect, 117

Ribosome, kidney
see Kidney ribosome

Ribosome, liver
see Liver ribosome

Ribosome protein
sodium, 109

Ribosome RNA
corn root, 452
3 hydroxyltermini analysis, 1113
yeast, 1113

Ribosome 70 S
Escherichia coli, 682
millipore filter absorption, 684
polyuridine binding, 685
mRNA, 682

RNA
analysis, 561
nucleotide composition, 1119
ribonuclease T1, 561
Saprospira grandis, 1199
yeast, 1119

RNA, bacteriophage
see Bacteriophage RNA

RNA H^3
preparation, 1114

RNA, insoluble
see Insoluble RNA

RNA phage
host cell metabolism, 47

RNA phage R17
Escherichia coli, 47
TS mutant, 47

RNA polymerase
actinomycin D, 561
assay, 560
cell nuclei, 559
detergents, 562
freezing, 563
glycerol concentration, 563
ionic strength, 560

RNA polymerase activity
storage time, 564

RNA synthesis
endonuclease, 503
Escherichia coli, 49
polyoma virus, 1104

RNA, viral
see Viral RNA

mRNA
binding, 682
nephrotic kidney, 311
polyribosome association, 1104
ribosome 70 S, 682

mRNA polyribosome associated
see Polyribosome associated mRNA

mRNA synthesis
chloramphenicol, 795

tRNA methylase
adenine, 703
adenine derivatives, 702
adenine N¹ oxide, 703
adenine phosphate, 703
adenine sulfate, 703
S adenosylethionine, 702
8 aza adenine, 703
6 dimethyladenine, 703
dimethylallyladenine, 703
Escherichia coli, 702
inhibition, 702
isopentyladenosine, 703
6 mercaptoadenine, 703
6 methoxyadenine, 703
6 methyladenine, 703
purine, 703

RNase
denatured state, 962

Rotenone
reduced nicotinamide adenine dinucleotide oxidase, 474

Rumen micro-organism
glutamate synthesis, 465

Salmon
see also Pink salmon

Salmon humps
lipid composition, 839

Saprospira grandis
RNA, 1199

Sedimentation coefficient
DNA polymerase, 533

Seminal vesicle
pyruvate kinase, 1268

L Serine ethyl ester hydrochloride
synthesis, 2

L Serine glyoxylate aminotransferase
inhibitors, 491
kinetics, 487
purification, 486

Serine phosphoglyceride
Helix lactea, 581

Serotonin
2,4 dinitrophenyl sulfonyl chloride, 665
glutamate dehydrogenase, 204

Serum
immunodiffusion, 713
immunoelectrophoresis, 718

Serum albumin, bovine
see Bovine serum albumin

Serum ceruloplasmin
adrenalectomy, 161

Serum esterase
characterization, 1359
inhibition, 1363
substrate characteristics, 1362

Serum iron
ascorbate, 1343
citrate, 1343
lactate, 1343
pyruvate, 1343

Serum lipid
choline, 1234

Serum protein
inflammation, 841
preparation, 842

Serylglycine benzyl ester para toluene sulfonate
synthesis, 1

Simian virus 40
see SV40

Single stranded DNA
endonuclease, 389

Skeletal muscle
see Muscle

Slow muscle mitochondria
oxidative phosphorylation, 27

Sodium
ribosomal protein synthesis, 109

Sodium arsenite
sulfite cytochrome C^{14} oxidoreductase, 340
thiosulfate oxidizing enzyme, 359

Sodium lauryl sulfate
ortho diphenol oxidase, 199

Sodium pentobarbital
see Pentobarbital sodium

Sodium sulfate
thiosulfate oxidizing enzyme, 359

Spheroplasts
preparation, 894

Sphingomyelin
lung lipid, 172

Sterculic acid
reactions, 759

Steroid sulfate 4 C^{14}
biosynthesis, 148

Steroid sulfate 1,2 H^3
biosynthesis, 148

Steroid synthesis
adrenal gland, 85
monkey, 85

Stokes radius
DNA polymerase, 532

Streptomyces griseus
protein hydrolysis, 1177

Streptomyces verticillatus
L phenylalanine ammonia lyase, 613

N Substituted L amino acid
physical properties, 650
preparation, 650

Substituted urea
urease, 1132

Succinate
palmitate 1 C^{14} oxidation, 568

Succinate dehydrogenase
muscle mitochondria, 28

Succinate oxidation
chloramphenicol, 470

Succinoxidase
chloramphenicol analog, 473

Sulfamidase
heparin, 725

Sulfhydryl compound
phosphodiesterase I, 1154

Sulfhydryl group
adenosine triphosphate hydrolysis, 604

Sulfhydryl inhibitors
carboxypeptidase A, 10
isocitric dehydrogenase (NADP), 100

Sulfhydryl peptides
muscle phosphorylase, 763

Sulfhydryl reagent
DNA polymerase, 533

Sulfite
adenosine 5' phosphosulfate reductase , 348

Sulfite cytochrome C oxidoreductase
2,2' bipyridyl, 340
chloride, 340
para chloromercuribenzoate, 340
ethyl diamine tetra acetic acid, 340
N ethylmaleimide, 340
iron content, 338
kinetics, 338, 595
mercuric chloride, 340
ortho-phenanthroline, 340
phosphate, 340
product inhibition, 595
properties, 334
reaction mechanism, 600
sodium arsenite, 340
Thiobaccillus thioparus, 334, 594

Superoxide anion
cytochrome C^1, 935

Surface component
purification, 852

SV40 transformation
cells 3T3, 851

3T3 cell
see Cell 3T3

Tagaturonic acid
uronic isomerase, 167

Talosamine
cation exchange resin, 387

T. denitrificans
adenosine 5' phosphosulfate reductase, 353

Teleost fish
adrenocortex, 553

Temperature
corticosterone synthesis, 740

N Terminal amino acid
globulin S^{12}, 1100

Terminal deoxyribonucleotidyl transferase
assay, 537
deoxyribonucleotide triphosphates, 538
DNA polymerase, 538
DNA products, 538
native DNA, 538
pH optimum, 538
purification, 537

N Terminal isoleucine
nitrous acid, 671

N Terminal sequence
Escherichia coli protein, 1295

Testis
orthopterin, 407

Tetrahydrofolate
oxidation products identification, 1005
oxidative degradation, 999

Tetrahydropterin
reduction potential, 526

Tetramethyl para phenylene diamine
fatty acid synthesis, 1229

Thin layer chromatography
separation of corticosteroids, 741

Thiobacillus thioparus
adenosine 5' phosphosulfate reductase, 353, 594
sulfite cytochrome C oxidoreductase, 594
thiosulfate oxidizing enzyme, 594

Thioglucosidase
Crambe abyssinica, 1024
organic reducing agents, 1024
preparation, 1024

1 Thio beta D glucosiduronic acid
beta glucuronidase, 799
synthesis, 799

Thiol
estradiol, 1192

Thiopurine
combination therapy, 82
tumor resistance, 82

Thiosulfate
adenosine 5' phosphosulfate reductase, 344
sulfite cytochrome C oxidoreductase, 334

Thiosulfate oxidation
proposed pathway, 362

Thiosulfate oxidizing enzyme
2,2' bipyridyl, 359
para chloromercuribenzoate, 359
cytochrome C, 359
ethyl diamine tetra acetic acid, 359
enzyme properties, 356
N ethylmaleimide, 359
ferricyanide, 359
kinetics, 598
mercuric chloride, 359
ortho phenanthroline, 359
product inhibition, 598
purification, 356
reaction mechanism, 602
sodium arsenite, 359
sodium sulfate, 359
sodium sulfite, 359
Thiobacillus thioparus, 355, 594

Threonine deaminase
valine and isoleucine, effect of, 812

Thrombin
alpha chymotrypsin, 435
bovine, 432

N terminal amino acid, 433
trypsin, 435

Thrombin inactivation
nitrous acid, 432

Thrombogenic diet
Pasteur effect, 224
phosphofructokinase, 222

beta Thujaplicin
catechol O methyl transferase, 1330

TMPD
see Tetra methyl para phenylene diamine

Transfer RNA
see tRNA

Transferase I
protein synthesis, 736

Transferase II
protein synthesis, 736

Transferrin
iron III, 1332

Trifluoroacetyl haptoglobin alpha 1S
amino acid sequence, 140

Trifluoroacetylation
haptoglobin alpha chain, 133

Transglucosylamylase
acceptor influence, 1260
Candida tropicalis, 1260
purification, 1261

Transglucosylation
dextrin, 1263
ethanol, 1264
ethylene glycol, 1264
glycerol, 1264
isopropanol, 1264
methanol, 1264
para nitrophenyl alpha D glucose, 1263
penta erythritol, 1264
phenyl alpha D glucose, 1263
n propanol, 1264
1,2 propylene glycol, 1264
1,3 propylene glycol, 1264

Triglyceride
lung lipid, 172

2,4,6 Trinitrobenzene sulfonic acid
pancreatic elastase, 1249
alpha N benzoyllysine, 1256

Trinitrophenylated elastase
amino acid composition, 1251
enzymic digestion, 1251

Tripeptide analog
alpha chymotrypsin, 1

Tritiated RNA
see RNA H^3

5' O Trityladenosine
adenine phosphoribosyl transferase, 575

Tropolone
catechol O methyl transferase, 1330

Trypsin
homolysine derivative, 1122
kinetics, 1122
epsilon N methyl lysine, 1122
thrombin, 435

Trypsin kinetics
effect of chain length, 1122

Tryptamine
2,4 dinitrophenyl sulfonyl chloride, 665

Tumor
thiopurine resistance, 82

Tumor cell
in vitro metabolism, 517

Tumor cell, murine
see Murine tumor cell

para Tyramine
DOPA, 1287
dopamine, 1287
monoamino oxidase, 1289

Tyrosine
ascorbic acid, 1179
glucose cycloacetoacetate hydrolysate, 1178

Tyrosine aminotransferase
adrenalectomy, 14
cortisol, 13, 1299
cyclic lighting, 14
daily rhythm, 13
phosphoenolpyruvate carboxykinase, 1247
liver, 13
protein diet, 1299
rat, 13
regulation, 1043, 1297

Tyrosine aminotransferase activity
enzyme adaptation, 1043
liver, 1043
mice, 1043

Tyrosine aminotransferase induction
glucose effect, 1044

Ultraviolet spectrum, middle
see Middle ultraviolet spectrum

Urea
brain, 230
cathepsin activity, 1054
phosphodiesterase I, 1156
phosphodiesterase elution, 1148
urease, 1136

Urea, substituted
see Substituted urea

Urease
carbamic acid ester, 1132
12S form, 631
sedimentation coefficient, 631
substituted urea, 1132

Uridine triphosphate
aspartate transcarbamylase, 156
pyrimidine specific carbamyl phosphate synthetase, 156

Urine
gold determination, 824

Uronate isomerase, continued
tagaturonic acid, 167

Uronic acid isomerase
acetate, 166
borate, 166
chondroitin sulfate monosaccharide, 168
dextrin, 165
enzyme assay, 164
enzyme induction, 165
Flavobacterium heparinum, 164
fructuronic acid, 166
galacturonic acid, 167

Uronic acid isomerase, continued
glucose, 167
glucuronic acid, 165
heparin, 165
heparin monosaccharide, 168
hyaluronic acid monosaccharide, 168
iduronic acid, 167
5 keto gluconic acid, 167
lactone, 167
pH optimum, 166
phosphate, 166
purification, 164
temperature, 165

UTP
see Uridine triphosphate

Valine
threonine deaminase, 812

Very low density lipoprotein
cholesterol, 717
human serum, 712
lipoprotein components, 712
phospholipid, 717
protein content, 717
rat serum, 712
triglyceride, 717

Virus RNA R17
protein synthesis in vitro, 438

visual cortex
protein bound amino acid, 238

Vulpinic acid C^{14}
preparation, 1241

Wheat germ
L cysteinylglycine, 1029

Wheat mitochondria
adenylate kinase, 697
ADP/O ratio, 694
adenosine triphosphatase, 697
inorganic pyrophosphatase, 697
oxidative phosphorylation, 692
respiratory control, 694

White muscle
see Fast muscle

Yeast
insoluble RNA, 1115
ribosomal RNA, 1113
RNA, 1119

Zinc
carboxypeptidase A, 7